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DECEMBER 10, 1926

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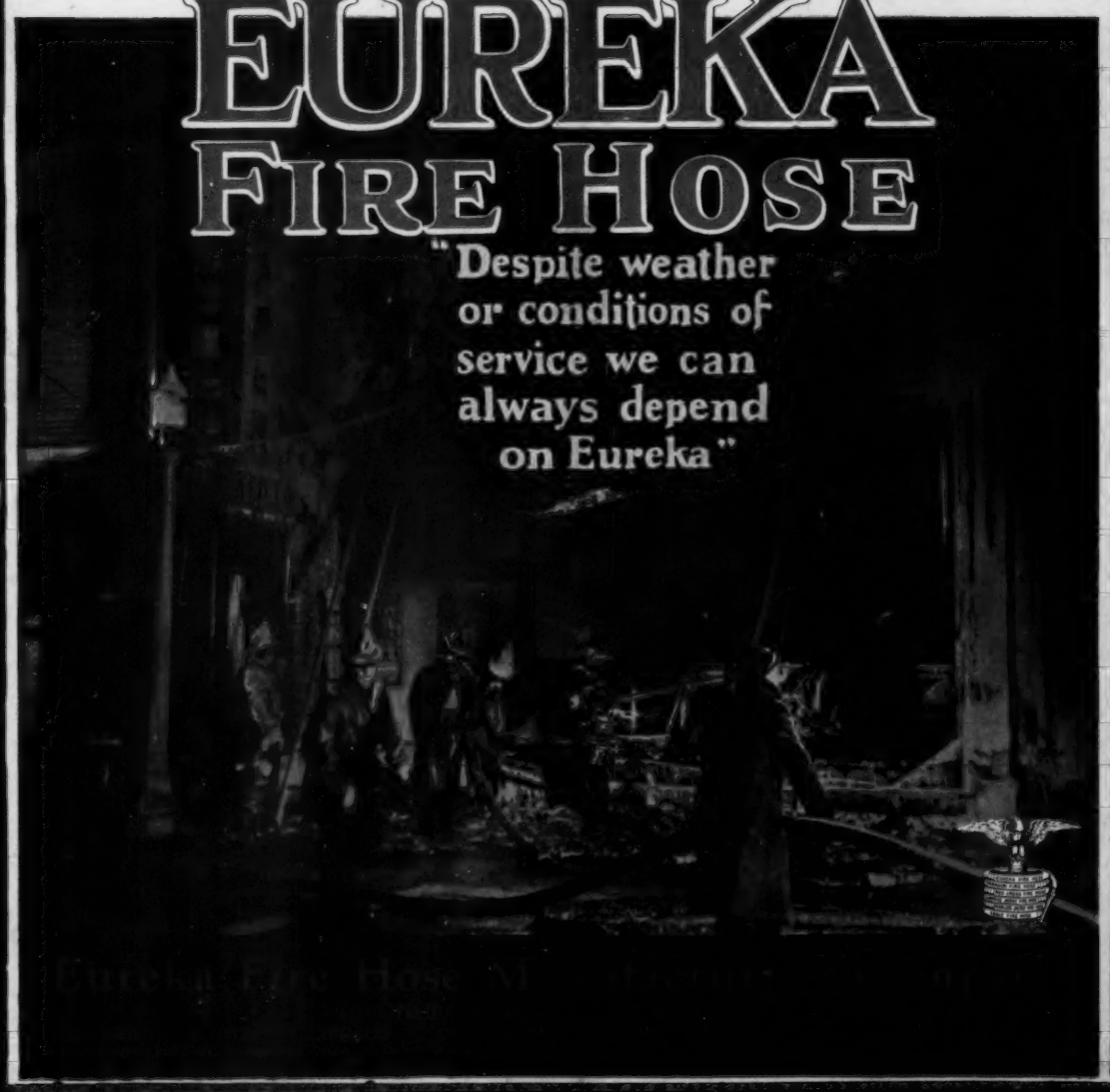
FIRE HOSE

"Despite weather or conditions of service we can always depend on Eureka"



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THE "Experiences of our Noted Fire Chiefs" which have been appearing in Fire Engineer for the past year under the heading "The Hardest Fire I Ever Fought" have attracted nation-wide attention.

In response to numerous requests we have incorporated them in an interesting book which will be given any fire chief, or his assistants, for the mere asking. Send for your copy today.

THE B. F. GOODRICH RUBBER COMPANY
Established 1870 Akron, Ohio

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When the Seagrave Standard Pumper does battle with treacherous, leaping and licking tongues of flame, the Seagrave Standard Pumper wins.

It is the pumper which meets every requirement of both large and small fire fighting organizations. The centrifugal pump and engine driving it are high speed units, perfectly synchronized. With the Seagrave Standard Pumper there is no vibration of the engine nor pulsation in the hose line.

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The Journal of the Fire Protection Profession Since 1877

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KARL M. MANN, President and Advertising Director
FRED SHEPPERD, Managing Editor
I. HERBERT CASE, Vice-Pres. and General Manager
H. S. ESSEX, Advertising Manager; ROBERT H. LOCKWOOD, Editor; N. N. WOLPERT, Asst. Editor
HAROLD T. MURRAY, Western Manager, 30 N. Michigan Ave., Chicago, Ill. Telephone: Central 4922.

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It's Music to Our Ears.

WE are receiving so many friendly letters from our readers, the gist of their message being "Keep up the good work—FIRE ENGINEERING is improving with every issue;" "Better than ever in its history;" "The most valuable paper I know,"—that we want to take this opportunity to thank you, and to assure you that we are going to continue trying to make the paper better and better.

One way is suggested by Chief E. A. Capen, of Troup, Texas, who writes:

"FIRE ENGINEERING is all you claim and more. It has some very interesting items that are applicable to departments of all sizes.

Would like to have more subjects covering volunteer fire departments. Sometimes I feel our work is harder than that of paid departments as we have poor equipment and mostly untrained men to use.

When the officials of small places realize the importance of keeping the fire department properly equipped, then it will be much easier to preach and practice fire prevention."

Good idea, Brother Capen! Let's all try to follow it.

The Publishers

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Of Course there's No Mistaking AHRENS-FOX Apparatus!

This Graphic Drawing is being used in the national fire prevention advertising of Johns-Manville, Inc., and is furnished to FIRE ENGINEERING through their courtesy.

AHRENS-FOX performance stands out from the ordinary run of fire apparatus just as the distinctive "fighting face" of the Ahrens-Fox pumper makes it readily recognizable wherever it is seen.

Outstanding character is an invariable attribute of Ahrens-Fox apparatus!

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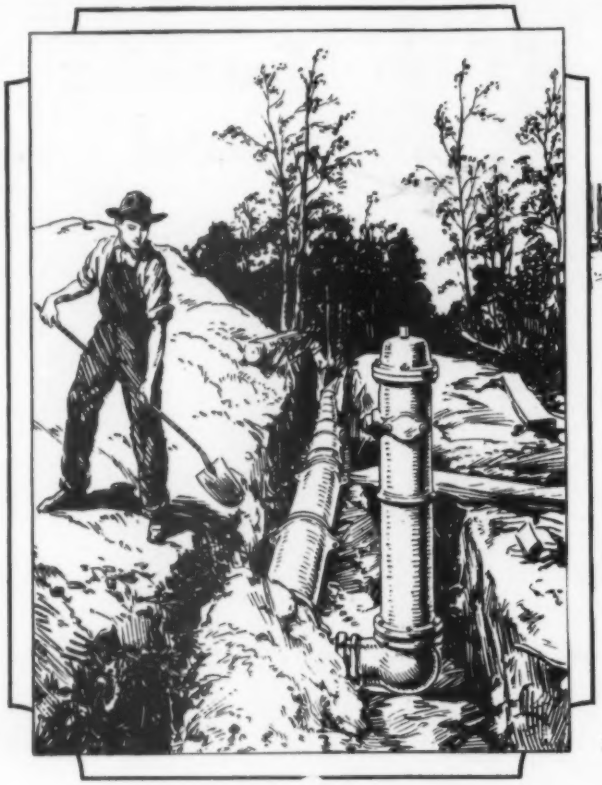


By Invitation Member

Extension Section

New streets; probably new levels— so they equipped with DARLINGS

The extreme ease with which Darling Fire Hydrants can be adapted to new grades and fill-ins has prompted many fire departments to use Darlings in preference to all others.

An extension section of any desired length from 6 to 60″ can be inserted quickly and easily, elevating the head to the required level. It is not necessary to remove the working parts or disconnect the base from the line to accomplish this.

If yours is a progressive town or city, it is planning new streets every season. Why not install Darlings in those new sections and eliminate the usual water system troubles that accompany grading and filling?

Catalog sent on request to fire and water department officials.

DARLING VALVE & MFG. COMPANY
WILLIAMSPORT, PENNA.

New York Chicago Houston
Oklahoma City

DARLING
FIRE HYDRANTS

The equipment of this emergency car at Atlantic City includes Foamite *tanks in place of the familiar but less efficient soda-acid tanks*

Atlantic City's new "Rescue Squad" car

Equipped with Foamite *Model H D Chemical Tanks to control any type of fire—more quickly and with less damage to property . . .*

EVERY Fire Chief who has seen genuine Firefoam in action will understand the practical value of Atlantic City's new "rescue" car shown above.

The two 40-gallon tanks of *Foamite* chemical solutions carried on this car will generate about 600 gallons of fire-smothering Firefoam, discharging it in approximately four minutes, over a range from the nozzle of about 50 feet horizontally and 35 feet vertically.

Advanced fires of oil, gasoline, paint, etc., can only be controlled by this equipment. It also controls ordinary fires far more quickly than do water or liquid chemicals and without the damage to property that a flood of water often causes.

The Atlantic City Fire Department is one of many that have recently installed *Foamite* Chemical units, either double-tank or single-tank. And more than 900 Departments are now using *Foamite* 2½-gallon Hand Extinguishers to control the smaller incipient fires.

Ask for a demonstration. Also let us send you complete catalogs of *Foamite* equipment and *Childs* Heavy Duty Motor Fire Apparatus.

FOAMITE-CHILDS CORPORATION

Fire Protection Engineers and Manufacturers

317 Turner Street, Utica, N.Y.

Sales and Engineering Representatives in all leading cities

Foamite-Childs of Canada, Ltd., Toronto, Ont.

Genuine Firefoam from Foamite *equipment clings tight to any solid surface — floats on liquids—kills fire and prevents reflash. "Insulates" burning material and reduces heat. No damaging flood of liquid!*

At right—the Foamite *2½-gallon Fire Dept. Type Extinguisher, now in use by over 900 Fire Departments*

Foamite-Childs Protection

A Complete Engineering Service

Against Fire

Kelly Kats for speed with safety

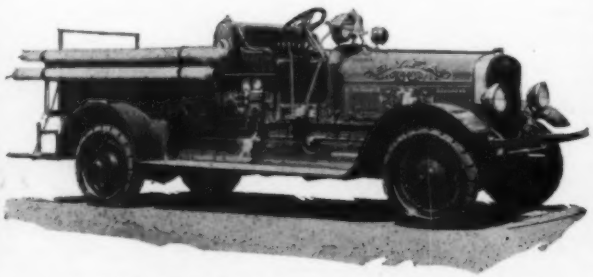
Speed without safety endangers life and property—with Kelly Kat tires on your fire equipment, engines and men are safeguarded without sacrificing the speed necessary to efficient fire fighting.

Because of the deep-cut notches, which Kelly originated and perfected, Kelly Kats, even in the worst winter weather, are able to hold any road surface without slipping and sliding. Kats grip the road and push forward with all the power the engine passes back to them. Snow, slush or icy pavements are all the same to Kelly Kats—they take hold anywhere with a grip like a giant's hand.

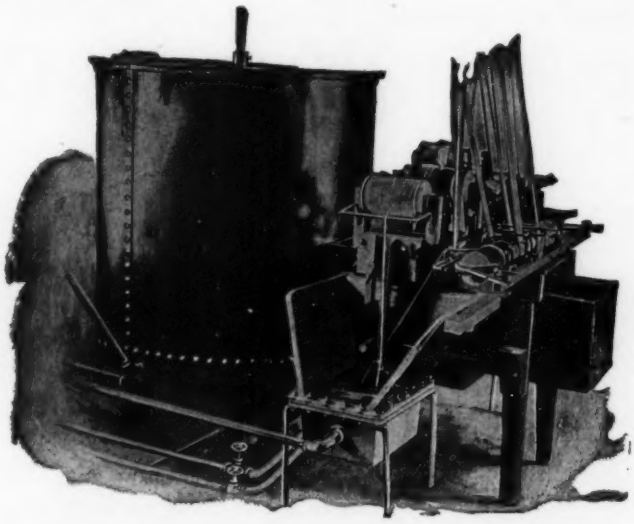
When the call comes in and your men drive out in a hurry, their chances of making good time to the fire and arriving there safely are immeasurably increased if their trucks are equipped with Kelly Kats.

KELLY-SPRINGFIELD TIRE CO.

250 West 57th St., New York, N. Y.



As safety, while driving to and from fires, is so essential to the efficiency of a fire department, you will find many fire chiefs, once they have used Kelly Kats, insist upon having all their trucks Kelly equipped.



One of the machines used in the manufacture of the famous

FABRIC

Wax and Para Gum Treated Cotton Rubber Lined Fire Hose

OUR first process—that of treating cotton yarn with melted wax and Para gum. The "wax" is ozocerite and the "gum" is smoked latex from the rubber tree. This compound is kept in hot solution in the steam heated cylindrical tank of the TREATMENT MACHINES. The hose cord passes through this hot "treatment" and becoming thoroughly impregnated renders the fire hose fabric from which it is woven, MILDEW-PROOF, ROT-PROOF, PLIABLE, STRONG and DURABLE.

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Newark
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A little journey through the GAMEWELL FACTORY

Packing and Shipping

From the shipping room of our plant fire alarm apparatus is sent out to all parts of the globe. It must be loaded on express and freight cars, trucks, ships and other means of transportation by expressmen, longshoremen and even coolies and native laborers. The packing of apparatus for such journeys presents a problem worthy of more than passing attention.

Consider for a moment the nature of the repeater, register, transmitter and box mechanisms and you will realize the care that must be taken in packing to protect them from the shocks and jars encountered in shipping.

Fire alarm boxes are first packed in individual corrugated cartons and then crated together in lots of four, when they are being shipped in quantity lots. These cartons are specially constructed to absorb shocks and jars. Where individual fire alarm boxes are being shipped they are placed in sturdy wooden boxes.

Switchboards of all types represent a great deal of effort and expense, all of which can be rendered useless through damage in shipment. They are therefore packed with great care. Other apparatus presents problems equally as difficult.

Years of experience and continuous vigilance on our part have reduced to a minimum the damage and breakage of apparatus in transit.

The Gamewell Company

Newton Upper Falls, Mass.

"A Box A Block"

FIRE ENGINEERING

(A Consolidation of Fire and Water Engineering and The Fire Engineer)

The Journal of the Fire Protection Profession

VOLUME LXXIX DECEMBER 10, 1926 NUMBER 23

Fire Department Medical Examiner and His Duties

Strict Health Tests and Need for Perfect Physical Manhood—Color Blindness and Deafness—Method of Tracing Defective Hearing

An interview with Dr. WILLIAM J. McNALLY, of the Boston Fire Department, by Harry Belknap

ONE of the foremost medical authorities connected with fire department work in America is Dr. William Joseph McNally, who for the past ten years has held the position of medical examiner of the Boston Fire Department.

He was born in Charlestown, Mass., on October 8, 1863; and after attending the public schools, went to Boston College and the Harvard Medical School, graduating from the latter institution in the Class of 1887. In 1908 he established the first open air school in the Prescott School District of Charlestown. the objects being the segregation of defective juveniles, the tabulation on card records of the same, and the correction of known defects under medical supervision. Regulation feeding was provided for the children while under exposure to fresh air and outdoor schools proved highly beneficial. This was the beginning of a widespread and national movement for better physical manhood and was a powerful factor in the detection and prevention of the spread of tuberculosis.

Dr. William Joseph McNally, Medical Examiner, Boston Fire Dept.

Dr. McNally served as medical inspector of schools and as agent of the Boston Board of Health from 1894 to 1916 and also held the position of senior examining physician for the Prudential Life Insurance Company in the New England district. He is a prominent member of the Massachusetts State Medical Society and was appointed to the Boston Fire Department position in 1916.

Physical Examination of Utmost Importance

"The physical examination of applicants for positions in the fire service is of the utmost importance," declared Dr. McNally recently in an interview with the writer.

"There is no calling where there exists a greater need for men of strength and fitness to meet any emergency that they may be confronted with. Lives may depend upon the stamina of a single fireman who may be called upon for rescue work with a scaling ladder; the safety of an entire company responding to an alarm rests on the keenness of vision and hearing of the man in the chauffeur's seat.

"In small towns and villages, as well as in large cities with metropolitan forces this matter of physical examination is an important factor and there is no place in any regularly organized fire department, however small, for the man who is lacking in physical endurance when the supreme test comes."

Dr. McNally recently attended the fifth annual convention of the National Association of Police and Fire Surgeons and Medical Directors of Civil Service Commissions. The object of this association is to promote an interchange of modern medical and surgical ideas that will work for the betterment of uniformed civic employes and to standardize physical and medical requirements.

Physical and Mental Power Must be Properly Balanced

The founder of the association. Dr. Hubley Owen, is now exerting every effort to obtain for the city of Philadelphia the best available material for its police and fire departments and to improve upon the existing standards.

"Physical and mental man power properly balanced is a prime requisite in the making of a fire fighter," emphatically declared Dr. McNally.

"Fire Commissioner Hultman, of Boston, a man of broad ideas and quick conception of proper methods to pursue in the attainment of departmental efficiency, is working along similar lines to those employed so successfully by Dr. Owen.

"The old, but inexpensive 'Ounce of Prevention' which spells safety first is far more effective and economic than a costly 'Pound of Cure' labeled safetv last. All of the great and successful public service corporations are progressive and take notice of every new development for the good of the service; our municipal departments should not be lacking in this regard.

"Let us first get the man power obtainable for our fire departments, then infuse a proper spirit of competition for advancement and promotion, and the results will be superior men and creditable service.

Normal or Acute Hearing Important

"The standards approved by the association require men to be five feet, seven inches tall and with minimum weight of 140 pounds. The matter or normal or acute hearing is very important as an aid in the performance of prompt service.

"A new scientific instrument for the testing of hearing has been devised, namely. the Western Electric No. 3 Audiometer. This instrument can check up on the hearing of anyone and determine with speed and accuracy any deficiency which may exist and by a means which cannot be influenced by the person undergoing the test.

"In the fields of transportation and industry it has been discovered that many failures of the personnel apparently due to dullness of the faculties are in reality due to impaired hearing. Similarly in educational institutions, examinations frequently show that the so called "dull student" is a victim of defective hearing that isolates him from much of the oral instruction.

Developing the Audiometer

"The primary requirements for tests of hearing are quickness and reliability. To meet these conditions the audiometer has been developed by the Bell Telephone Laboratories, Inc., the research laboratories of the American Telephone and Telegraph Company and the Western Electric Company, out of their long experience as developers of electrical equipment for oral communication.

"Each step of its development has been carried out in close contact with the medical profession in an effort to adapt the audiometer, both in capacity and accuracy, to the technique and the requirements of its various users. Individuals without technical knowledge can readily handle the equipment.

"The machine is simple in design and consists essentially of a device for producing a complex tone, an attenuation poten-

tiometer, and a telephone receiver. A portable case is provided, forming a mounting for the fixed portions of the machine.

Good Eyesight Essential

"Applicants for fire department positions must be free from color blindness and be able to read with each eye separately standard test types at a distance of twenty feet. The loss of either eye, chronic inflammation of the lids, or permanent abnormalities of either eye must cause rejection.

"Automatic or mechanical machines can never supercede intelligent manual effort in the production of artificial respiration. The H H Inhalator, as used in conjunction with the prone method while producing manual artificial respiration, is the last word in up to date procedure in the handling of all cases of toxemia from gas and smoke.

"The condition of heart and lungs are important factors to take into consideration and the re-examination of men at stated intervals is advisable. Physical tests often show up unanticipated weaknesses and every officer and member of the uniformed force of the Boston Fire Department from rank of captain down to private is now required to go through drill school evolutions once every year under direction of Capt. Daniel W. Baker, the department drillmaster."

Many Duties of Medical Examiner

The duties of medical examiner in a metropolitan fire department are many and varied and it is strictly up to the doctor to decide what men shall be placed upon "Light house duty" and what men are sufficiently recovered from injury or illness to warrant their being assigned to respond with the apparatus.

All applications and claims for pensions must go before the medical examiner and it is often a difficult problem to determine whether certain disabilities resulted from injuries or strains received while on active duty or while the petitioner was on a day off.

During the influenza epidemic some years ago, Dr. McNally had his hands full with men becoming victims of the malady in fire stations all over the city, in some instances entire companies being affected.

All Sorts of Ailments and Injuries are Treated

The effects of inhaling celluloid fumes have also proved a serious menace, the men often not realizing their position until they drop at their posts of duty sometimes 24 hours or more after the actual inhalation took place.

Carbon monoxide poisoning, smoke exhaustion, cuts from falling glass, broken bones, sprains, and minor injuries all come in the daily life of the city fire fighter; colds that are neglected may develope into pneumonia; but most feared of all things by the "smoke eater" is the falling wall, a menace that nearly always brings death and serious injury.

At all multiple alarm fires ambulances should be on hand with complete first aid equipment to meet any emergency; but the injured list is being steadily reduced thanks to the better physical conditions of the modern fireman who is able to withstand exhausting duty that would have sent his comrades of a few years ago to hospitals.

The work of Dr. McNally and his colleagues in urging strict examination requirements for prospective members of fire departments is already showing beneficent results in developing a finer type of officers and men and adding to departmental efficiency.

Result of Two Standards of Hose Threads

Five steamers tied up at Buffalo, N. Y., due to the formation of ice on the lakes, carry extra equipment as the result of the disimilarity of hose threads in Detroit and Buffalo, the two terminals of the boats' runs.

Each of the boats that is docked, belong to the Cleveland & Detroit Steamship Company. The crafts are equipped with two separate sets of siamese connections for sprinklers. When the vessels dock at Buffalo, the starboard side is next to the wharf and when they dock at Detroit, the port side is near the land.

Accordingly the Detroit siamese connections on the port side are so situated that the Detroit Fire Department can make-up from the wharf. This is likewise true of the Buffalo Fire Department operating from the starboard side of the steamers.

Because the hose threads of the two cities are not similar, it is imperative that the large lake boats dock at their proper side so that the fire departments are able to connect with the siamese in the event of fire.

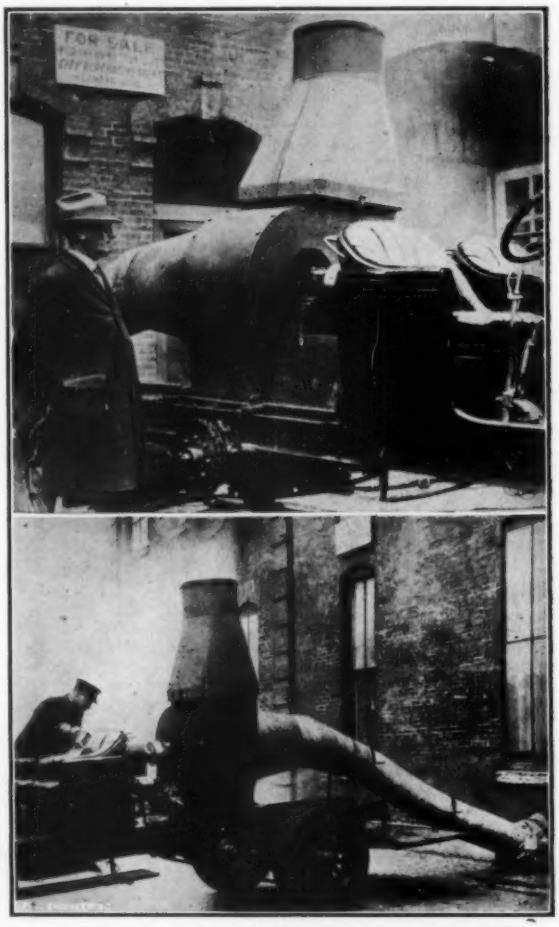
WM. J. DALY.

Brookfield, Mass., to Purchase Apparatus—The town of Brookfield, Mass., has voted $7,000 for the purchase of fire apparatus to replace that destroyed when the fire station was burned.

"Smoke Eater" Designed by Chief Ringer

An apparatus that resembles the old steamer in appearance and which is used to remove the smoke from a burning building has been designed by Chief C. W. Ringer of Minneapolis, Minn.

One of the most serious hazards in fire-fighting is the possibility of the firemen becoming overcome from smoke and noxious gases. The new apparatus works on the principle of a vacuum cleaner and sucks out the undesirable gases. A hose of about fifteen-inch diameter is connected with the burning building and the large fan is started. The fan exhausts the air at the rate of 10,000 cubic feet of air per minute, and it is not long before the building is safe enough for the men to enter. While the principle is an old one, the application to the fire fighting field by Chief Ringer opens up a new method of fire-fighting.



Upper—Chief Ringer and his "Smoke Eating" Machine. Lower—The New Apparatus in Operation.

Chief and Fireman Awarded Damages

Battalion Chief Thomas F. Norton and his chauffeur, members of the New York city fire department, sued the Nassau Electric Railroad Company for $50,000 damages for the injuries received as the result of their automobile overturning after being struck by a trolley car while on the way to a fire on October 28, 1924. Both of the men at that time were thrown from the automobile and received cuts and other injuries.

The case was tried before the Supreme Court. Battalion Chief Norton was awarded $20,000 damages and his chauffeur, $5,000. Norton said that as a result of the injuries he received, he is unable to do fire duty. He had been in the department for thirty-five years.

Weehawken, N. J., Chief Completes Fire Course—Chief William J. O'Neill of Weehawken, N. J., has completed a course at the New York Fire College.

Need of Uniform State Fire Prevention Laws

Hazard of Unregulated Communities Outside of Cities and Towns—Uniform State Building and Fire Prevention Regulation Would Prevent Loss

By CHIEF SPENCE D. TURNER, Los Angeles County, Cal. Fire Department*

UNIFORM state fire prevention, and building laws are becoming more and more of a necessity and movements to create such laws are being considered by many of the state fire chief's and firemen's organizations. In this paper the author cites California as an example of the evils arising from the lack of such legislation:

In attempting to provide systematic fire prevention regulations by state legislation, the matter of fire protection should also be carefully considered. Certain broad indisputable facts must be borne in mind to give a clear understanding of the tremendous importance these subjects have, relative to the public welfare and the imperative need of state regulations on fire problems in general

Need of Adequate State Fire and Building Laws

It is vitally important that the people themselves should take a broader view-point on "fire prevention" and fire problems, and that they should be made to realize, as has been conclusively proven, not only by the records of our own Los Angeles County Fire Department, but by all other fire departments in the States lacking such legislation that due to the absence of effective fire and building laws, the losses from fire have reached proportions so alarming as to make this question one that seriously affects the economical welfare of such commonwealths.

These fire losses, resulting from the burning of buildings and contents, added to the wide spread destruction of forests by fires, is, in the minds of those who believe in a rational plan for the conservation of State resources, undoubtedly the greatest obstacle to be overcome.

The situation throughout California and many other states is the same, but, in order to illustrate more clearly the absolute need for state-wide fire protection and fire prevention legislature, it might be well to show how we are trying to handle the problem here in Los Angeles County, and the obstacles that we find in our way; these same obstacles other chiefs have doubtless found, and will continue to find, until they are removed by legislation.

Problems of Fire Warden's Office

The fire warden's office in this county has charge of fire prevention and suppression in all unincorporated territory, a great deal of which consists of heavily built-up communities adjoining the city of Los Angeles or other municipalities, communities which in some cases have populations of as high as 50,000 and assessed valuations up to $25,000,000.

Two years ago these districts, unincorporated, subject to absolutely no building regulations, without adequate fire protection, constituted a tremendous fire hazard, not only to themselves, but also to the incorporated cities which they bordered, and whose building codes and fire ordinances could not be applied outside of their municipal limits.

State Fire Protection Districts Formed

That the loss of buildings and contents can be very materially reduced by organized effort, has been clearly proven in this county since the organization of a fire prevention bureau, and by the formation some two years ago of fire protection districts, formed under the provisions of a state law then passed, which allows unincorporated territory to purchase and maintain fire equipment through a special tax.

At the present time there are some 33 such districts in this county, each equipped with modern up-to-date pumping engines, manned by trained crews, and stationed in suitable fire houses; these districts being administered as the Los Angeles County Fire Department, under the jurisdiction of the board of supervisors, with the county fire warden as their agent.

Work of the Fire Prevention Bureau

At about the same time the fire prevention bureau of the fire warden's office was formed, and now consists of four men who cover all the unincorporated territory in the county, and already in the 33 actively formed fire protection districts, these men, working in co-operation with the respective fire department captains, have made thorough inspections which have resulted in a great number of fire hazards being eliminated, and a general betterment of building conditions has been accomplished.

To bring such conditions about, however, is a very difficult matter, due to the fact that we are handicapped through the lack of proper building codes and regulatory measures, and the bureau's work in the main has been accomplished by incurring the good will and co-operation of the residents of the county. Inspection of apartment houses and hotels is carried on actively in co-operation with the state housing inspector and partial remedies are accomplished through the state housing act, the only legislation under which we can operate, but which is totally inadequate, as it does not have any jurisdiction over dwellings in unincorporated territory.

Bad Situation Which Should be Remedied

This is a situation which should be remedied immediately, and we hope that strong pressure will be brought to bear at the next session of the California Legislature to have the dwelling house

* From a paper read before the annual convention of the California State Firemen's Association.

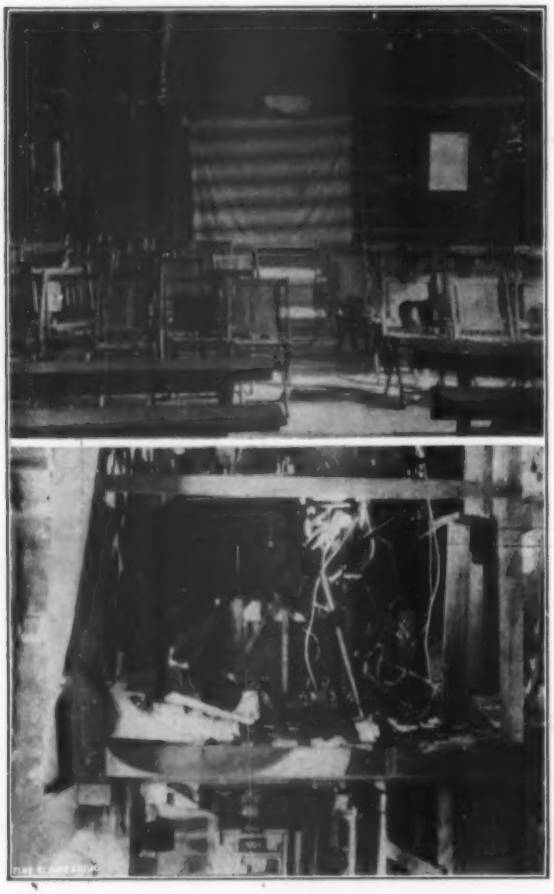
Dry Cleaning Establishment in Old Wooden Shed in Heart of a Business Section.

Note the open fires burned in the rear of wooden shed and the quantity of inflammable rubbish lying around, as shown in the left-hand picture. There were 250 gallons of gasoline in washhtubs, milk cans and wooden vinegar barrels, used in the frame building or wash room.

provision of this Act amended to include unincorporated territory. The construction and maintenance of sanitariums, theatres, schools and places of public assemblage can in no way be regulated by our bureau, except through the board of supervisors, and then only insofar as the granting or revoking of operating permits. That the lack of regulatory measures applying to private schools has been most disastrous in this county, is proven by the fire of May 31, 1924, at the Hope School at Playa Del Rey, where 23 children lost their lives. At the present time inspections are made by our bureau of all such sanitariums and institutions, but, as I have just mentioned, these are regulated only through the issuance of a permit to operate.

Municipalities at Mercy of Unregulated Communities

Due to the efforts of our fire prevention bureau, at the present time there are very few refrigerating plants operating in this



Picture Theatre with Hazardous Conditions.

Upper view shows interior of moving picture theater in a frame structure, having a seating capacity of 350, and the lower, the wrecked projection booth, after a fire. This theater had only one exit, opening in, which was placed directly beneath the picture booth.

county without a diffuser or gas mask; large warehouses, storing goods of every description have been inspected, and suggestions made, many of which have been gladly carried out by the owners; oil refineries, storage tanks, oil reservoirs and well operations, all have been gone over and are still being worked on with varying success, but, until we get some universal state law with teeth in it, we are going to be far from accomplishing our object.

Each municipality has its own fire and building ordinances which are more or less successful, but these same cities, no matter how rigidly they enforce their own laws, are frequently at the mercy, from a fire protection and fire prevention standpoint, of the unprotected, unregulated communities which have sprung up at their outskirts, and which, for some reason or other, remain unincorporated, and therefore are a fire menace, not only to themselves, but, to the adjoining municipality.

Last Spring there occurred two disastrous oil field fires at the Santa Maria and Brea fields, where huge storage reservoirs were ignited through lightning striking the oil vapors, which resulted in "boil-overs" which in turn ignited other reservoirs. Yet, in spite of this, a reservoir is now being constructed beside which these others are of no comparison, its capacity being 4,600,000 barrels; should this ignite and boil over, it is so situated that it is well within the bounds of possibility that in the resulting chaos, the towns of Wilmington and San Pedro, together with the harbor shipping, would be seriously menaced; yet, there

A Bad Frame Hotel Hazard.

This frame hotel of twenty-four rooms was being constructed from second-hand lumber and was not being erected in compliance with the State Housing Commission. It did not have any foundation, the supports and cross sills resting directly upon the ground, which shows the need for better legislation governing structural conditions.

is no law under which proceedings can be taken to cope with this situation.

Increase in Individual Responsibility Needed

It would seem that this present lack of legislation is due primarily to a difference in view-point; the neglected civic responsibility of the individual; the hesitancy of communities and civic organizations to support movements for statewide legislation, and the extreme difficulty in drafting and securing the adoption of proper building codes regulating construction and maintenance, which is occasioned by sectional differences of opinion, as to just what would be best for an entire State, and yet would not work a severe hardship on any one community or subdivision in it.

A candid inquiry into the differences in opinion and lack of civic responsibility of the individual, would disclose the fact that state and county fire losses are principally occasioned by the peculiar moral attitude of the individual toward the phenomenal fire waste. A lesson in safety to the individual, therefore, means safety to the whole community, and vice versa. The full realization of the responsibility that the individual owes to the community should result in the former contributing to the community, safety measures in all matters of building construction by the erection of structures which will not prove a menace to his neighbors. This would result in benefit to the community as a whole; investors would improve their property by the erection

Wiring Conditions Found After a Residence Fire.

This house was wired by an unlicensed, incompetent electrician. The greater part of the wiring which was used was ordinary doorbell wire. A few connections were made with unsoldered and loop joints to No. 14 electric wire. The wire was too light for the load and no thought was given to insulation.

of more costly and permanent structures as they could feel assured that their investments would not be continually threatened by constant hazard through the actions of irresponsible neighbors having no thought or care of civic pride or duty.

Need of Uniform State Legislation

This attitude of civic pride should not be confined to com-

(*Continued on page* 1264)

New Rules of the New York Fire Department

This Third Installment Covers Duties of Company Commanders, Lieutenants, Supervising Engineers, and Engineers of Steamers—General Rules

FOLLOWING is the third installment of the "Rules and Regulations of the Uniformed Force of the Fire Department of the City of New York," just issued by that department, and which are to be published serially in their entirety in FIRE ENGINEERING. *This book has been compiled and edited by Captain John J. McCarthy, of H. & L. No. 43, detailed in charge of the Division of Public Assembly at Fire Headquarters, who worked under the personal supervision of Chief John Kenlon. This installment includes sections covering the duties of Company Commanders, Lieutenants, Supervising Engineers and Engineers of Steamers. It also begins the general rules of the Department.*

Company Commanders (Continued)

SEC. 77. Upon discovering or learning of a condition imminently perilous to life or property, they shall immediately notify the Chief of Battalion and the Bureau of Fire Prevention. A violation form, with a line in red ink drawn vertically through the centre of the first fold, shall then be forwarded.

SEC. 78. They shall cause fire alarm boxes to be inspected and reported upon monthly. Care shall be taken to see that boxes have been rewound.

From November to April, they shall cause the doors, key slots and handles of all street fire alarm boxes to be maintained clear of all ice and snow accumulations.

Telephone reports of broken or missing red globes, designating fire alarm boxes, shall be made to Telegraph Despatchers.

Key slots of gas shut-off and ammonia valve boxes shall be examined and tested monthly.

SEC. 79. They shall see that all hydrants are properly lubricated; that they are inspected at regular intervals, (daily during the cold season) and promptly thawed out, or reported, when found frozen.

They shall see that snow and other accumulations are removed from in front, and for the space of ten feet each side, of hydrants. Where street excavations are made in front of hydrants, contractors shall be required to make suitable provision for the unobstructed use of such by this Department.

SEC. 80. When in command of a double company, i. e., a company with a double set of apparatus complete, and with a number of members designated for such a unit, they shall adhere to the following:

Each set of apparatus shall be manned as prescribed in schedules promulgated for the two-platoon system, and shall be known as the first and second section, respectively.

The first section shall respond to the first call to duty received and the second section shall respond to all subsequent calls, in accordance with General Order No. 1, 1925.

They shall change the personnel of sections whenever the needs of the service require.

SEC. 81. They shall, without unnecessary delay in reaching fires and without depleting platoon strength below normal, cause summary action to be taken against persons who violate the Code of Ordinances by denying the right of way to Department vehicles.

They shall also request police action when hose, in use at fires, is driven over by vehicles not authorized to enter or pass through fire lines.

SEC. 82. They shall thoroughly instruct new members in the duties required of them when detailed to theatres and places of public assembly; shall keep the theatre detail badge in their possession until required for official use, cause the number of the badge and the name of the wearer to be recorded in the Company Journal at the time of leaving quarters and upon return thereto.

They shall hold members strictly accountable for any derelictions of duty which may be reported by officers assigned as theatre inspectors.

SEC. 83. They shall, when assault or other criminal offence is committed by members, immediately notify, by telephone, the Deputy Chief of Department commanding their Division, and forward a written report, through regular channels, to the Chief of Department. No further action, other than the forwarding of charges, shall be taken until directed by the Chief of Department.

SEC. 84. They shall receive from the offices of the District Attorneys of the various counties, or from criminal courts, subpoenas for members of their companies. They shall receipt for such and shall be responsible for the proper service thereof upon the members for whom issued.

Subpoenas, in civil actions, shall not be accepted by Commanding Officers, for members, until the Division Commander has been notified. Deputy Chiefs shall authorize the acceptance of such subpoenas when they are in a position to furnish details of members.

A report of subpoenas served shall be forwarded to the Chief of Department.

In the event of a house watchman's inability to effect service of such subpoenas within twenty-four hours, they shall be returned, through regular channels, with an explanation concerning their non-service.

SEC. 85. They shall promptly report to the Chief Instructor, or to the head of the Fire College or of the various schools, by telephone, to be followed by a written report, all transfers, resignations, dismissals, and the absence for any cause of members assigned to such college or schools.

SEC. 86. They shall see that all apparatus and department vehicles in quarters are properly cared for and protected.

SEC. 87. They shall be responsible for the strict enforcement of every order, rule or regulation in their respective commands.

SEC. 88. They shall, in the event of accident, take the necessary action promptly to place the company in service.

Lieutenants

SEC. 89. They shall have charge of the platoon opposite that directed by the Captain, who shall command the entire company. All reports by Lieutenants (except fire, death and accident reports) shall be forwarded through the Captains.

In an extended absence of the latter, it shall be the duty of the Lieutenants to assume the responsibilities of Captains, but no change shall be made by Lieutenants except with the knowledge and consent of the Company Commander, or upon order of a superior in rank.

Supervising Engineers

SEC. 90. They shall respond to alarms for fire, as directed by the Chief of Department.

SEC. 91. At fires, they shall visit each pumping engine in use, note any defects and make such adjustments or changes as will increase the efficiency of the apparatus.

They shall also exercise control of distributions by fuel wagons, and at fires in the high pressure districts supervise the operation of high pressure hydrants.

SEC. 92. They shall instruct operators of pumping engines when necessary; note any neglect or incompetency in the operation of engines, and, if not corrected, forward a written report thereon to the Chief of Department.

SEC. 93. The Supervising Engineer assigned during the day to the Repair Shop shall supervise all tests of pumping apparatus before such are placed in service.

He shall, when directed by the Chief of Department, supervise the lubrication of apparatus.

Engineers of Steamer

SEC. 94. They shall be held responsible for the condition and proper running of engines. If any of the parts get out of order, they shall immediately report the fact to the commanding officer.

SEC. 95. All parts of apparatus under their control shall be thoroughly claen at all times. All metal work shall be kept bright, and on parts where there is friction clean cotton waste shall be used. Woodwork shall not be cleaned with kerosene oil or gasoline.

All supplies furnished for cleaning purposes shall be used economically.

SEC. 96. They shall operate and maintain in good order all house and engine heating plants between the hours of 7.30 a. m. and 8.30 p. m. and when on night housewatch duty.

SEC. 97. They shall carry on steamers fuel for at least one hour's work. On gasoline-pumping engines they shall keep supply tanks of apparatus filled while in quarters and account for all gasoline received at fires.

SEC. 98. The water level in steam boilers shall be maintained at a point between the second and third gauge cocks. When in quarters, the fire must be so regulated that the water in boiler will always be at the boiling point, but under no circumstances shall the steam pressure, while in quarters, exceed twenty pounds.

SEC. 99. They shall set the safety valve to lift at a pressure

(*Continued on page* 1262)

Sacramento Wins Thomas H. Ince Cup

The Thomas H. Ince fire prevention trophy for cities on the Pacific Coast of 100,000 population or over, has been awarded to Sacramento, Cal., for its fire prevention record for the period 1925-1926. The points in determining the awards are based on the reduction in the number of fire alarms, arson activities, elimination of fire hazards, inspection and a better fire department efficiency over that of the year previous.

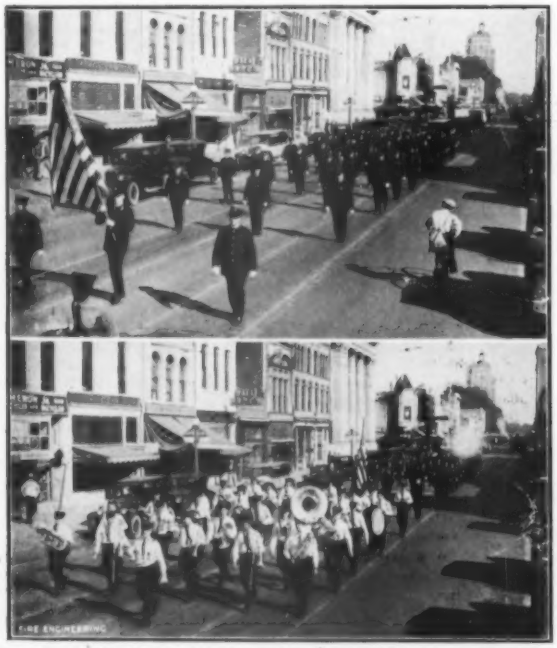
Chief M. J. Dunphy has worked hard for this award and in line with this work has carried out a very effective Fire Prevention Week program. About 13,500 home inspection blanks were distributed to the children of the various city schools, and 5,000 self inspection blanks were distributed to the merchants. Of the number distributed, ninety-five per cent were filled out and returned to the office of the chief.

In the realm of outdoor advertising, two hundred large posters were displayed in store windows and fifty-seven of the merchants who had large amounts of outgoing mail pasted 20,000 fire prevention stamps on their mail. During the week, daily articles on fire prevention appeared in the various newspapers of the city, including school and foreign publications. The various clubs and hotels carried propaganda on their menu cards, and fire prevention messages were also printed in the theatre programs.

The department distributed 25,000 hand bills calling attention to the hazard of accumulation of rubbish in basements, attics and closets. Slides were used in the various theatres and the motion picture "America's Greatest Crime" was shown forty times.

Firemen gave instructions in the proper operation of the fire alarm boxes and the manner in which an alarm should be turned in. The secretary of the Insurance Federation of Sacramento addressed the various civic and fraternal organizations.

Pupils of the Leland Stanford Jr., High School staged the "Trial of Fire," and other schools had pantomimes and special fire department drills. Competitive contests were held to see which of the schools could be emptied in the least amount of time, and prizes were awarded to the three schools with the best fire prevention records.



Two Views of the Sacramento, Cal., Fire Prevention Parade

A parade was held in the business section of the city, and many of the civic organizations cooperated in effectively disseminating the fire prevention message.

Fireman Fined for Using Apparatus as Taxi—A fireman of Ashbury Park, N. J., was fined and his resignation ordered when it was learned that he had used the fire apparatus as a taxicab. He had the apparatus take him to a refreshment stand a mile from the fire house so that he could buy an ice cream soda.

Chief Flores of Shreveport Re-Appointed

S. J. Flores, chief of the fire department of Shreveport, La., and well known in fire department organizations, has been re-appointed chief by the new administration. An attempt was made to name a new candidate but Mayor Thomas opposed the move and outlined his reasons for retaining the present chief.

Chief S. J. Flores, Shreveport, La.

Mayor Thomas said: "The fire department was not an issue in the recent political campaign, and the department was never criticised, except by one speaker, who retracted his statement and apologized therefor the next day, and the candidates for commissioner of public safety declared that no change would be made in the organization of the fire department of this city.

"No charges of incompetency or inefficiency have been made against the chief of the fire department, and it is unfair and unjust to him, after 20 years' faithful service in the ranks and when he has reached the top of the ladder, to displace him without good and sufficient reasons.

"The chief of the fire department should not be made the football of politics to be kicked about with every changing administration, and it has not been the policy of this city to do so, extending over the long period of 28 years, during eight different administrations, where no change has even been made in its chief.

"The constant changing of a fire department, and especially its chief, will destroy the confidence of the Louisiana Fire Prevention Bureau and the fire insurance and business people in the success of our fire department, and will tend to increase rates, with which we already are threatened, and believing it to be for the best interest of our city, as well as not fair to the present chief that such a change should be made, I am compelled to vote for the retention of Hon. S. J. Flores, as chief of the fire department."

Many Chiefs Attend Browning Funeral

Forty chiefs from various New England towns and cities attended the funeral of the late Chief Robert Browning of Central Falls, R. I., who died while assisting in fighting a fire at Pawtucket.

The three hour funeral service was conducted at St. George's Episcopal Church. After prayers at the family home, the funeral procession passed to the church through streets lined with people anxious to pay the last respects to the gallant fire-fighter.

Honorary bearers comprising city officials and fire department heads of nearby communities followed the hearse while on either side walked the active pall bearers—four lieutenants and four captains of the department.

The honorary bearers were Chief Charles H. Fuller of Pawtucket; Chief Frank Charlesworth of Providence; Chief Charles L. McCarthy of Worcester; Chief James E. Smith of Nashua, N. H.; Chief Fred H. Clark of Attleboro; Chief Augustine Cote of Woonsocket; Chief Arthur Griswold of East Providence; ex-Chief Rueben D. Weekes of Providence, and ex-Chief Irving F. Patt of Central Falls. City officials of Central Falls who served as honorary bearers were Mayor Joseph B. Dolan, President Thomas B. Davis of the Board of Aldermen; Police Chief James McCarthy, former Alderman Fred C. Burroughs, Thomas O. Allen and Thomas Hobson.

Although it was not the custom to deliver a funeral eulogy at the church, the Rev. William E. Dowty, rector said that the unusual qualities of an unusual man warranted a departure from the custom.

A mound of floral tributes were formed on three sides of the grave, where, after a brief service, the body was laid to rest.

Modern Fire Alarm Signalling

Traffic Signal Apparatus—Description and Some of the Common Troubles and Remedies

By E. W. KEIRSTEAD, E. E.

THIS is the fifteenth of a series of articles on the care installation and repair of various phases of fire alarm work. The author has had practical experience in this field, and he will answer questions on this subject that are submitted to him by the readers, free of charge. The only condition is that a stamped envelope must be enclosed for reply.

Description.

One of the greatest problems facing the fire chief and superintendent of alarm systems is that of traffic. In large cities the speed of the fire apparatus has been limited by the fire commissioners, in order to cut down the number of accidents and fatalities in and out of the department.

At the recent convention of fire chiefs in New Orleans this topic was discussed, and a committee of three fire chiefs and three heads of the police department are to be selected to try and devise a system to take care of the ever increasing trend of auto traffic.

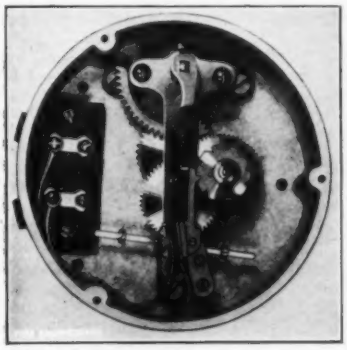


Fig. 43. Warning Signal Control.

It will be a very hard matter to arrange some system where it will be possible to keep the automobiles from following the apparatus to the fire, but a city has the means to warn foot and auto traffic of the approach of fire apparatus. Some chiefs do not approve of sirens and warning bells to warn people of the approach of apparatus as they believe that it informs the public of the alarm and as a result the apparatus is followed by numberless automobiles.

There is a law in force in Massachusetts making it a misdemeanor to approach to moving apparatus closer than 300 feet and six hundred feet to the apparatus at a fire. It was the misfortune of the author a few days ago to have his own house on fire and the amount of machines which responded, along with the fire apparatus was amazing. It shows that the present law is not enforced.

It is an established fact that a city must have some means of giving a warning signal at all squares, intersections, cross roads and blind streets and in order to give these signals there must be some kind of controlling units, etc. There are various types of sirens, gongs, flashlights, whistles, etc., for warning and controlling traffic, and this article takes up the types most commonly used. Before entering into the work, however, some data will be given about the selection and placing of the equipment.

Sirens should be purchased with the idea in mind that they must stand the weather conditions and give at all times a loud, shrill signal. It is necessary to procure a waterproof siren to withstand the weather, and the bell of the siren should give the diaphragm ample protection to exclude all snow and ice. The siren should be placed at a position where the opening of the bell will be facing the direction where the sound is desired to be the strongest and it should not be mounted at the top of the pole. It will be heard a great deal plainer at a distance of from twelve to twenty feet from the ground. The siren should not be kept operating steadily, but it should have a controlling mechanism whereby it is possible to have the sound rise and fall—this will attract more attention than a steady high hum. In places where danger is very acute it will be well to have a red light suspended from a wire hung over the center of the street and to control this light on the same movement as that of the siren; the flashing light is more desirable than the fixed one.

Some cities have a square frame constructed with a glass front and sides, and they paint the word FIRE on it in large red letters. This method will, as a rule, serve to stop all traffic in any direction.

Where gongs are to be used it is best to use the continuous ringing type and special care should be taken to see that you procure a gong which will stand open weather and at the same time give good results. The gong can be rung either continuous or stop and start, as desired. There are several cities using gongs for traffic warning signal work and they have had very good results.

Wherever possible avoid placing the bell or mouth of the siren in a position where the snow and ice will drive into it in severe weather and tend to block the signal of the siren. On gongs which are exposed to severe weather it is a good idea to have a metal guard placed on them, allowing the guard to become caked with snow and ice instead of the gong itself. Wherever possible, avoid placing gongs and sirens at a point where a hospital is located as the medical authorities will complain. At this point, the apparatus should slow down in order to pass safely.

At points where apparatus is to pass each other, or cross each other, it will be well to operate the siren or bell longer than at other points, and the drivers should have special instructions to slow down at these points. There have been several fatal accidents recently where apparatus coming from one direction have crashed into apparatus coming from another route.

Traffic warning signals should be placed at the heads of all streets where apparatus emerges from their quarters, and the signal should be controlled from the engine house. There are several ways to operate the warning signals from the alarm itself, from headquarters and from the individual engine houses. The operation of the signals will be taken up a little further on in this article.

Installation of Equipment.

As explained before, the gongs or sirens should be placed at a point where the sound is most desired and it should, in addition, be so placed that the mouth of the instrument is facing toward this point. The proper distance for the mounting of sirens is from twelve to twenty feet from the ground and for gongs from six to fifteen feet. They may be mounted on wooden poles or iron poles, the top of box pedestals and traffic towers, etc.

Fig. 44. Flashlight Unit.

Where the siren is to be mounted on a wooden pole it should be securely fastened with toe lags or extra long spikes. The necessary wiring should be brought down the side of the pole and should be kept as close together as possible so as to allow a lineman to climb the pole without spurring or cutting the insulation on the conductors. Where a polarized relay is used for alternately flashing a light and ringing a gong, the relay should be mounted as near to the siren or bell as is possible so as to allow ready access to it in case of trouble. The relay, if of the iron case type, should have a backboard nailed or spiked to the pole to fasten the screws and to support the case from warping.

Both the relay case and body of the siren should be painted to give it protection against the weather, and all working parts should be kept oiled with Russian mineral oil. The siren can be adjusted by means of the adjusting screw on the end of the body or on the swivel depending on the type used. It should be

so adjusted that it gives a loud clear signal without a great deal of distortion and it should be firmly locked by means of the set screw furnished with the instrument.

The controlling relay and siren or bell can be installed by the alarm division and the live lines placed by the local lighting companies as the electric companies usually have a ruling whereby no one may make tap connections to their circuits but their men. It will be well to be present at the time the equipment is placed in order to observe whether it is being placed as desired. A working test can be made before the linemen leave to insure correct operation. Where it is possible to get a flat rate on current used to operate these warning signals, it will be an advantage as it will save the placing on every circuit of meters and also give a standard cost to the city whereas the cost otherwise might be higher. The electric companies will not, as a rule, install services unless a certain amount of current is to be used and a standard charge is made whether the amount is used or not. It is a very good idea to take the officials of the companies into consultation before you place your apparatus

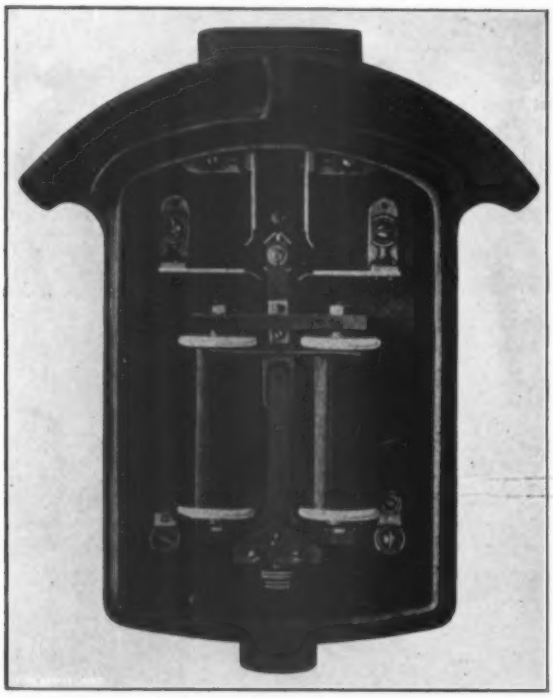


Fig. 42. Controlling Relay.

and you can then avoid a lot of changes due to unability to give services at certain points.

All controllers on one circuit should be hooked up in series, this being the best method as the operation of one would tend to check the condition of the circuit. In Figure No. 42 a controlling relay is shown, the connections being very easy to locate. The controlling circuit comes into the two bottom posts and terminates there. When all the controllers are hooked up, the circuit being put in an operating condition, the relay coils should energize and attract the armature to the right or left as the current flows through it; if the lines are reversed the armature will be attracted in an opposite position. This gives a flexible means of controlling a light and bell or siren alternating the effect. If no alternating of the signals is desired the bell and light can be controlled at the same time by the installation of the two like leads to the same terminals.

The installation of the controlling equipment in the engine house or headquarters can be made to suit the method of operation. If a push button is to be used to operate the system it can be installed on the watch desk or mounted on the wall. If it is placed on the desk, the push should be of the desk type (a lead weighted base being preferable) and placed in a position where it is easy to reach and at the same time not easily pushed off. If it is placed on the wall it should be installed at a height about the same as that of a fire box so that the center of the push button is about forty-eight inches from the floor. It should be mounted on a backboard before being placed on the wall to support it and this backboard should in turn be fastened to the will with screws or lagged according to the type of construction of the building. If it is possible the wiring should run down the partition and if such is not possible, the wire should be encased in metal duct or some other type of approved construction. The wiring should not ever be run down the wall loosely as the service will be apt to be out of commission at the time it is most needed. When an alarm is received and the company answers, the watchman will press the button giving the desired signal over the sirens and gongs.

The device shown in Figure No. 43 is what is known as a warning signal control unit and with its use it is possible to after starting it with a manual operation, have the unit transmit a continuous blow or intermittent blows as desired. After once being started, the machine will automatically cut itself out at the end of a two- or three-minute period, depending upon the timing of the movement. These machines can be mounted in a panel or on a backboard as is desired and can be set up in batteries of individual units, or one movement can, with the use of relays, control a number of different circuits. If mounted on a panel the wiring to the movement should enter in the back of the panel and to the back of the movement case where it terminates, it will be well to have these lines fused at their point of entrance to protect the movements from any abnormal currents and lightning. The unit should be mounted at a height where it will be accessable to anyone and still at the same time be placed so that a person accidently leaning against it will not trip it off and sound a signal.

The movements are made to give four rounds of a signal but if this is found to be too long and it is not desired to speed up the signal, it is possible to install a stop pin in the outer case to stop the travel of the arm thereby allowing only two or three rounds as desired. By pulling the handle down very carefully you will feel it slip by each time a round period has passed, at the next preceeding round the stop pin should be installed and the pin should go through the case and held by a nut securely threaded.

The fans directly below the contacts are for timing the speed of the movement and the sliding of the weights outward will slow down the speed of the signal and the sliding of the weights to the center will increase the speed of the movement.

Operation of Traffic Systems.

As explained before, there are several different ways of controlling or sounding the sirens and gongs and perhaps a brief description of some of the ways various cities operate their systems will be helpful. The city of Lakewood, Ohio, has three engine houses and sirens are placed at the intersections of streets approaching the houses. These sirens are controlled by siren control movements; the movements are encased in a panel called an engine house control panel. At the first round of an alarm the proper movement is started and the sirens are started; at the proper time the movement automatically stops awaiting the next alarm.

The city of Hartford, Conn., controls their traffic warning system by means of switches. At the fire alarm signal the box is counted and a card drawn out of the files with the corresponding number on it, this list has the numbers of the proper switches to be thrown and an operator is detailed for this service, at the end of a certain period of time the switches are restored to an open position cutting off the signal. This is a centralized method of operation and while perhaps the method is a little new it is nevertheless a very good one and more cities will in time adopt it.

In large cities there is at times a lot of confusion when the traffic sirens blow as there is no way of telling which way the apparatus is to come and as a result the police officer on duty cannot clear the street as it perhaps should be cleared. Where apparatus is to run down a street in both directions (it is a good idea to have) two traffic signal control units and a push button connected in multiple; where apparatus is to come up the street from the north to south, have a unit with a wheel cut with threes at intervals and an additional unit with twos cut on the wheel. The push button will give flexible means of giving a long or short blow as desired.

Now assume that we have an alarm of fire and companies are to come down the street from north to south the traffic control unit with the three signal will be started and the signal is transmitted 3-3-3-3 3-3-3-3 giving the officer on duty a warning that the apparatus is coming in a certain direction and it is easy for him to clear the way. If the apparatus is to come in another way the other unit is started and the signal sent 2-2-2-2, 2-2-2-2 and the direction is again indicated. If apparatus is to come both ways the first unit is started and allowed to give one complete round of its signal at which time the second unit is cut in and allowed to give one round of its signal. Where there are only two or three cross streets in the run it is possible to

(*Continued on page* 1264)

WITH THE EDITOR

An Admirable Stand

Chief S. J. Flores of Shreveport, La., has just been reappointed by Mayor Thomas of that city. As the Shreveport Fire Department may be termed a political one, the chief not being protected by Civil Service, his reappointment, in the face of opposition, is indeed commendable. The Mayor's arguments for his action indicate an understanding of the responsibilities of the fire service which deserves notice. He contends that the chief of the department should not be made a football of politics, to be kicked about with every changing administration, and asserts that it would destroy the morale of the fire department to have its chief changed with every changing administration of public affairs and without charges of any kind whatsoever being preferred for incompetency, inefficiency, negligence or other cause. Mayor Thomas is evidently appreciative of an efficient chief, and takes cognizance of what the head of his department has accomplished and is accomplishing. He is not interested in removing the chief just to make room for one of his political friends but, instead, believes that it is his duty to offer the city the very best protection possible from fire by maintaining in office a man who has made good in his position.

It is too bad that there are not more officials like Mayor Thomas who do their own thinking and act in the interests of the city rather than in the interest of their political organization only. He has set an example which deserves following not only in cities the size of Shreveport, but in many of our so-called cities of the first class.

Burning up the Fire Apparatus

In too many instances in the past few months one has read of cases where the apparatus of a fire department has been destroyed or partially disabled through a fire in the building in which the machines have been housed. Perhaps the most pitiful and helpless thing in the world is a fire department standing by and witnessing the burning of its own apparatus.

Of course there have been cases in which the firemen were not to blame in a matter of this kind, but too often the fire department has been guilty of contributory negligence in housing its apparatus in a structure which is not only non-fireproof, but—as in the case of a public garage—extremely hazardous. This may be the result of circumstances where a village is small and its funds or those of the department low, but it would seem that few municipalities—no matter how small the number of the inhabitants—if they can afford to purchase a fire engine cannot pay for a fire resistant structure to house it.

The practice of housing fire apparatus in public garages is a particularly pernicious one. In case of a blaze in the garage the whole village is left without fire protection, and is compelled to rely upon the protection that may be afforded by the next town or city with apparatus, which may be several miles away.

The first endeavor of a wide awake volunteer fire department which is about to be formed or has just come into being, should be to raise sufficient funds to safely and properly house its fire apparatus in a building that will not burn and is owned either by the village or the fire department.

Where Railway Company Is Liable

A victory of particular interest to the fire-fighting profession and which should reinforce the earlier precedents of similar cases was that won by Battalion Chief Thomas F. Norton, of the New York Fire Department, and his chauffeur in a suit against the Nassau Electric Railroad Company. The accident, which occurred on October 28, 1924, and which was caused by the automobile of the chief colliding with a trolley car, injured the chief so badly that he has since been incapacitated for fire duty. The crash took place while Chief Norton and his chauffeur were answering an alarm and when the trolley car hit the department auto, both men were thrown out and injured.

The suit was tried before Justice L. L. Fawcett, of the Supreme Court, and a jury, and the result was a verdict of $20,000 damages for Battalion Chief Norton and $5,000 for his driver.

This suit emphasizes the point that when a trolley car fails to respect the right of way to a fire truck answering an alarm, and a collision is the result, the railroad company operating such car is liable for damages for injuries to any member of the department involved in such accident. It also emphasizes the right of an officer or member of a fire department so injured in the performance of his duty to sue the railroad company for personal damages for such injury.

This case, aside from its legal aspects, indicates an evil that is becoming intolerable and one which should be taken up by the various fire department associations with the street railway companies—the tendency, apparently on the increase, of motormen ignoring the signals of approach of fire apparatus and deliberately placing themselves, their passengers and the members of the fire department in peril by such carelessness or indifference to danger. If the railroad companies could be induced to impose heavy penalties on their employees for ignoring the fire siren in such cases, and make them understand that infraction of such rules would mean

the loss of position or similar punishment, the number of such accidents causing loss both to the companies and the city—not to speak of loss of life and serious injury to employees—would be materially reduced.

There is little doubt that the railroad companies, if the matter were emphatically brought to their notice by the associations, would be glad to cooperate in remedying this evil, as such would be distinctly to the advantage of both the city and the railroad companies.

And, like Clem., may we deviate from our daily routine long enough to extend to you, our readers, our sincerest wishes for a happy Christmas and a prosperous New Year!

The Publishers

Can a Fire Horse Stage a Come-Back?

As an answer to the interesting problem as to whether a fire department horse can ever forget the training that he received, Chief George Watson of Washington, D. C., tried a novel but conclusive experiment.

About a year ago the fire department pensioned the three remaining fire horses in the department, and they were assigned to light duty at the Home for the Aged. When the question about the fire horses was put to Chief Watson he said that he didn't know but he was interested enough to find out.

One of the fire stations still had the stalls that were provided for horses, and a search was made to find one of the old horse-drawn hose wagons. As all of the horses were retired, a pumper was sent to haul the wagon to the house where the test was to be tried, and where the three pensioned horses were brought for the experiment.

They were placed in the stalls and everything made in readiness. Some taps were sounded on the gong but the horses seemed unconscious of the signal. Some one suggested that a real signal be sent in, and it was. The three horses trotted out of their stalls and without any confusion one went for the left, one for the center and the other for the right shaft. There was no rigging to hold the center shaft in place and the center horse at the center pawed the ground hopelessly. The horse on the left tried to push him into place. When the men adjusted the harness, the horses dashed out as though on the way to a real fire.

The horses have not answered a fire alarm for more than a year, and the test shows conclusively that a fire horse never forgets the routine of his training.

A. B. WHITE

"THE FIRE BRIGADE" WILL OPEN IN NEW YORK DECEMBER 20

Great Firemanic Motion Picture Sponsored by International Association of Fire Chiefs Will Be Featured in Big Way on Broadway—Bookings Being Arranged in U. S. and Canada

THE decision has just been reached to give "The Fire Brigade" its first public presentation on Broadway, New York City, December 20th, according to an announcement just made by Metro-Goldwyn-Mayer, who produced this epic-making picture in cooperation with the International Association of Fire Chiefs. It will be shown at the Central Theatre, in the heart of New York's white way, and with the admission prices ranging up to $2, it will receive a send-off similar to what was accorded such tremendous hits as "The Big Parade" and "Ben Hur," starting on its way with one of the greatest promotional campaigns even given a theatrical enterprise. A gala program is now being laid out for the first performance, which it is expected will be attended by many of New York's most prominent people.

Picture to be Shown Everywhere at Same Time

While the producers confidently feel that "The Fire Brigade" will remain on Broadway for several months at least ("The Big Parade" is now in its second year at one theatre) it has been decided to show the picture all over the United States and Canada at the same time. Copies of the film have been sent to the Metro-Goldwyn-Mayer Exchanges located at various points throughout the United States and Canada where bookings will be arranged for their respective territories. Requests have already been received from hundreds of theatres everywhere asking for first call on exhibition of "The Fire Brigade," and the producers say that there has seldom been such intense interest in any attraction before reaching the public.

Have Theatres Apply For Bookings

If you want an early showing of this picture in your city, make that fact known immediately to all of your local theatre owners and managers. They in turn will communicate with the nearest Metro-Goldwyn-Mayer Exchange which serves your territory, and make definite booking arrangements. Let the theatre men understand that you and your men will cooperate in every possible way to put the picture over when it comes to your city. In the meantime, stir up all the enthusiasm you can and let the people of your city know that they are going to see what is unquestionably the greatest firemanic picture ever produced, a remarkably spectacular photo-play filled with laughs, thrills and heartthrobs, that will show, for one thing, the great sacrifice the fire fighter is called upon to make in the line of duty. After your citizens see "The Fire Brigade," and get a better understanding of the hardships firemen are confronted with in their work, your request for a salary increase or for approval of any other measure concerning the welfare of your men, should receive better consideration.

So, let's all pitch in now and show the world that we can make this important project the big success it deserves. Any fire chief planning to be in the vicinity of New York, or those who can arrange to come on for the opening of "The Fire Brigade" Dec. 20th, can procure tickets by writing immediately to I. H. Case, c/o FIRE ENGINEERING, 225 W. 34th St., N. Y. C., who is Chairman of Publicity for the International Association of Fire Chiefs. Mr. Case will also be glad to supply chiefs with any further information they may want regarding "The Fire Brigade" and its showing. Bookings will be announced in Fire Engineering from time to time.

QUESTIONS AND ANSWERS

Conducted by FRED SHEPPERD, B. Sc., M. E.

"He that questioneth much shall learn much"—BACON

NOTE—Readers of FIRE ENGINEERING are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified.

Laws on Fire Prevention

To the Editor:

Will you please answer the following—"Give five provisions of law for the general prevention of fires."

Very truly yours,
C. S.,
Buffalo, N. Y.

Answer: Some of these laws are that electrical wiring must be done in accordance with the National Electrical Code.

There shall be no smoking back of the stage of theatres where the flimsy and highly combustible scenic effects may get on fire.

Dry cleaning establishments are only permitted to operate under certain conditions, that is where they are remote from other buildings, and provisions are made as to the amount of gasoline or other combustible liquids that are permitted on the premises (see local laws).

Oil burning equipment must be installed in accordance with local regulations, and only a certain quantity of oil is permitted on the premises.

Sprinkler installations required in certain hazardous industries such as the storage of motion picture films and in the storage and manufacture of pyroxilin plastic or celluloid articles.

Vacuum in a Centrifugal Pump

To the Editor:

Will you kindly favor me with a reply to questions concerning a centrifugal pump in order to settle a point in question between A and B.

A maintains that a centrifugal pump forms a vacuum in producing a discharge of water.

B maintains that a centrifugal pump does not form a vacuum in the discharge of water.

Please inform me which is right, A or B, and favor me with an explanation in detail of the working of pumps from source of supply to discharge of water.

Sincerely yours,
C. P. H.
Taunton, Mass.

Answer: When a bucket is filled with water and swung around at full arms length, the water will not leave the bucket even though it be completely inverted during its course through the air. But punch a hole in the bottom of the bucket and swing the bucket around and a stream will leave the bucket through its entire path—the stream actually going upward when the bucket is up over the head and going downward when the bucket is at a lower point. This phenomena is the foundation for the operation of the centrifugal pump.

This same principle can well be shown by dropping a particle on a rotating table. The particle is immediately whirled outward and leaves the edge of the table, possibly at considerable speed where the table is rotating rapidly. The tendency to move is always outward, or in other words, the centrifugal force acts outward causing the particle to go away from the center of rotation.

Now in the centrifugal pump we have a moving member which is known as the impeller. It may be compared to a hollow-shaft paddle wheel in which the water enters through the hollow shaft at the center of the paddle wheel and as the wheel whirls around the water is whirled outward.

In practice the blades of the wheel are not straight as they would be in a paddle wheel, but are curved in the direction in which the wheel rotates.

When the pump housing is completely filled with water and the impeller is rotated rapidly the water is thrown outward and tends to create a vacuum, or suction, this suction drawing more water through the intake pipe of the impeller to replace that which is thrown outward. While a total vacuum could never be produced in a centrifugal pump, there is a tendency to produce such a vacuum and it is true that a partial vacuum exists (or the pressure is reduced to a point below atmospheric pressure). It is this so-called partial vacuum, or suction, which keeps the supply constant while water is being forced from the pump by the rotation of the impeller. A's contention that a centrifugal pump forms a vacuum is not technically correct for a complete vacuum is not produced. There is, however, as noted above, a partial vacuum formed.

On the other hand B's claim that a centrifugal pump does not form a vacuum is technically correct although practically B is in error, for a partial vacuum is created.

Calculations for Engine Pressure

To the Editor:

Will you kindly tell me if I am correct in the following problem and also if there is a better way to solve it?

Respectfully yours,
I. W. G.,
Salem, Mass.

Problem. An engine is pumping through 400 feet of 3-inch hose which is coupled through a reducer to 200 feet of 2½-inch hose, equipped with an 1¼-inch nozzle. Nozzle pressure is 50 pounds. What is the engine pressure?

Solution: First reduce the 400 feet of 3-inch hose to 2½-inch hose. $400 \div 2.6 = 154$ feet of 2½-inch hose. The total length of 2½-inch hose in the line is then $154 + 200$ or 354 feet of 2½-inch hose.

At 50 pounds pressure the discharge from a 1¼-inch nozzle is $29.7 \times 1.25 \times 1.25 \times 7.06$ (square root of 50) = 327 gallons per minute.

Friction in 100 feet of hose (2½-in.) $= 2 \times 3.27 \times 3.27 + 3.27 = 24$ pounds, where 3.27 is the number of hundreds of gallons flowing.

The friction loss in 354 feet will then be $24 \times 3.54 = 87$ pounds.

Engine pressure equals friction loss plus nozzle pressure or 87 plus 50 = 137 pounds approximately.

EDITOR'S COMMENT: While your method of solution is satisfactory and would be accepted by most examiners, the solution which gives the more accurate result is that which employs the Underwriters' formulae.

After you have reduced the hose to 2½-inch and find that the total layout is equal to 354 feet of 2½-inch hose, you use the following formula: Engine pressure equals nozzle pressure $\times (1.1 + .248 \times 7.08)$.

Nozzle pressure is 50 pounds; the figure 2.48 is the value of K for 2½-inch hose with 1¼-inch nozzle; 7.08 is the number of 50-foot lengths of hose in the line.

E. P. $= 50 \times 2.85584 = 143$ pounds approximately.

The New York City Service Examiners, for some unknown reason, made a deduction from the marks of those men employing the method of finding friction loss by subtracting the nozzle pressure from the engine pressure. This method of finding engine pressure is probably the most satisfactory of all methods where the hose is laid along the level and is one which may be safely employed in examinations in all cities with the exception of New York.

Strength of Chemicals

To the Editor:

We have two containers of Bi-Carbonate of Soda. One is put up in 10-pound bags and we use it for a 30-gallon chemical tank; the other is put up in bulk form in a 400-pound barrel and we use it for 3-gallon extinguishers. The barrel is labeled "Sodium Bicarbonate Soda."

Is there any difference in the strength of the two sodas and if there is what is it? Will each of the two chemicals give the same result?

Yours truly,
E. W. B.
Detroit.

Answer: Both of these terms are names for the same substance, and if the same care is exercised in its manufacture, there should be no difference in the strength of the two chemi-

cals. Next time you purchase this chemical, be influenced by the chemical purity of the material and not by the names. You can use each of the two chemicals, either in the 3-gallon or in the 10-gallon extinguishers with equal results.

Water Streams vs. Chemical Streams

To the Editor:

Kindly, at your earliest convenience, publish an article on the advantages of chemical over water in small fires confined to the interior of buildings.

My contention is that the acid and soda combination only tends to create a pressure and that the fumes have no effect whatsoever on fire as supposed by some. I am,

Respectfully yours,
K. W. H.
Norfolk, Va.

Answer: This subject has been discussed from time to time in the columns of this journal. Except in very closely confined spaces, chemical streams have no appreciable advantage over water streams of the same size. Streams from soda and acid chemical extinguishers carry with them a volume of gas equivalent to the volume of water discharged. Such volume of gas is usually a very small item from the fire extinguishing standpoint and cannot be said to exert any noticeable effect in extinguishing a fire. The chief results secured through the use of chemical apparatus of the soda and acid type is a cooling effect; that is, the fluid discharged by the extinguisher is directed upon the burning material and reduces the temperature of the burning material to a point below the reignition point. This is the manner in which such extinguishers operate. It is also the manner in which water streams operate.

It is commonly believed by many that the gas in the extinguishers produces a marked effect in extinguishing fire, this is contrary to facts. Only in rare cases where the fire is very much confined would the gas exert its effect. Also, where a fire is very much confined it is likely to be smoldering only, due to the fact that the air in the immediate vicinity of it has become depleted through the burning up of the available oxygen. Hence, even in this case, the advantage of chemical streams over water streams would be negligible.

The object of the chemicals in the soda and acid extinguisher is to produce a pressure which will discharge an effective stream of the fluid. That extinguishers function very well in this manner is well recognized. As a matter of fact, pressures up to 125 pounds may be generated by the reaction of the acid with the soda, and this pressure is fairly well maintained during the course of discharge of the extinguisher.

This satisfactory pressure plus the facility in directing the streams make the soda and acid apparatus ideal for fighting fires, but, as noted above, the extinguishing effect of the stream from the extinguisher cannot be said to be noticeably greater than that from water streams of the same size.

Effective Pressures on Nozzles

To the Editor:

Would you kindly advise me as to the maximum efficient nozzle pressures for the various sizes of standard nozzles.

According to formulas you can figure any size nozzle at say a 40 pound pressure which gives so many gallons per minute, and also you can figure the vertical and horizontal reach in feet; likewise the discharge and range can also be figured for 100 pound pressure with the same size nozzle which gives, of course, greater figures.

For example, we will take a 1-inch nozzle at a 64 pound pressure. This sends a stream 81 feet. If you figure the same size nozzle at 110 pounds pressure it sends the stream so much farther, or at 150 pounds pressure even still further.

Somewhere in between the 64 and 150 pounds is the maximum efficient pressure for each size nozzle, and that is what I would like to know.

I am well aware of the fact that 150 pounds nozzle pressure is too much for a 1-inch nozzle, and that the stream would go to spray long before that pressure is reached.

Would you also kindly give me the maximum effective pressures of the following size nozzles: 1", 1⅛", 1¼", 1½", 1¾", 1⅞" and 2".

Respectfully yours,
D. H. A.
Oakland, Calif.

Answer: For nozzles from 1⅛-inch to 1¼-inch, 40 to 60 pounds is considered satisfactory. For a 1-inch nozzle the maximum effective pressure would probably be in the neighborhood of 60 pounds, while for a 1⅛-inch nozzle it would be in the neighborhood of 75 pounds; 1¼-inch nozzle around 90 pounds. For 1½-inch and larger nozzles pressures from 60 to 90 pounds are considered satisfactory. For a 1½-inch the maximum pressure may be taken at around 100 pounds; for 1¾ to 2-inch nozzles the maximum satisfactory pressure may be considered in the neighborhood of 110 pounds.

Gages and Pitot Gages

To the Editor:

Would a steam gage of suitable pressure reading tapped into a hydrant cap be a suitable and accurate means of determining the pressure available at any given hydrant, provided this special cap was substituted for one of the regular caps and the hydrant turned on?

Where can a Pitot Gage be purchased and what is the approximate cost?

Very truly yours,
D. F. B.,
St. Johnsbury, Vt.

Answer: A steam gage of proper size could be used under the conditions that you describe for obtaining the pressure available at a hydrant.

The pitot gage may be purchased from the American Schaeffer and Budenberg Corporation of 336 Berry St., Brooklyn, N. Y. They manufacture the complete gage with tube and all. The cost can best be determined by writing them direct.

Pitot tubes and clamps may be obtained from A. Schrader's Sons, 470 Vanderbilt Ave., Brooklyn, N. Y. This concern does not furnish the tubes complete with the gages, but the gages may be secured from the Crosby Steam Gauge and Valve Co., 10 Roland St., Boston. Mass. The tubes with the brackets complete cost between nine to ten dollars. The gages come in two styles—the Underwriters gage which is the most accurate and which is calibrated from an individual test is the most expensive. For general purposes it is well to buy the cheaper gage—the one with the stamped dial instead of the individually calibrated one.

Volume of Circular Tanks

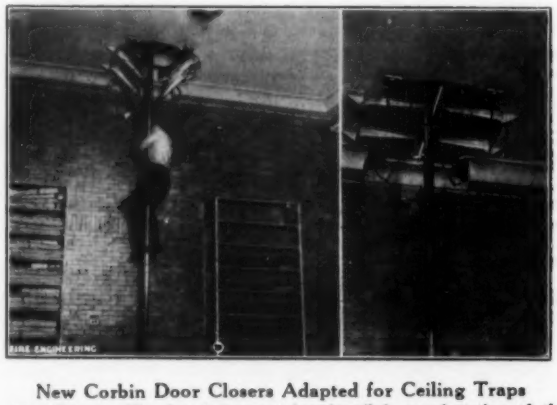
To the Editor:

Will you please publish the method of obtaining the capacity in gallons of a circular tank without reducing to cubic inches? The method I use is to reduce to cubic inches, but there is a simpler method when dimensions are given in feet.

Very truly yours,
C. A. C.,
Lynn, Mass.

Answer: When all the dimensions are given in feet, multiply the area of the bottom of the tank by the height of the tank and multiply this by 7.481. The constant is the number of U. S. gallons in one cubic foot. All of the measurements of the tank must be in feet, and if one of the measurements is stated in inches, it must first be reduced to feet that all of the figures are in feet.

In using the cubic inch, it is necessary to divide the answer in cubic inches by 231— the number of cubic inches in one U. S. gallon.



New Corbin Door Closers Adapted for Ceiling Traps

The Chicago, Ill., fire department has installed an adaptation of the Corbin door closers for sealing the openings through which the firemen slide, when the sliding pole is not in use. The traps are made in two parts and are so designed that the traps will open by the weight of the man sliding down the brass pole, and the door closers will bring the trap sections back to their normal positions. It is so designed that the man can pass through the trap doors without any personal injury. At the left is shown a man who has just passed through the trap, and the trap sections have not been brought back to their normal position. At the right is a view of the device as seen from the floor—the arrangement of the four door closers and the especially constructed hinges are plainly seen.

Here's Where Big Streams Are Needed

Best for Covering Exposures and for Reducing Fire in "Woodworker"—Small Streams Ineffective

FOR a description of this fire and the method employed in fighting it, the reader is referred to the last issue of this journal.

The Department

The department in the city in which this fire occurred consists of 12 engine companies, 4 ladder companies, and 2 hose companies

A first alarm from the neighborhood of the fire brings out Engine Cos. Nos. 1, 2 and 3, and Ladder Co. No. 1, equipped with a city service truck. All engine companies are equipped with motor propelled triple combination pumpers.

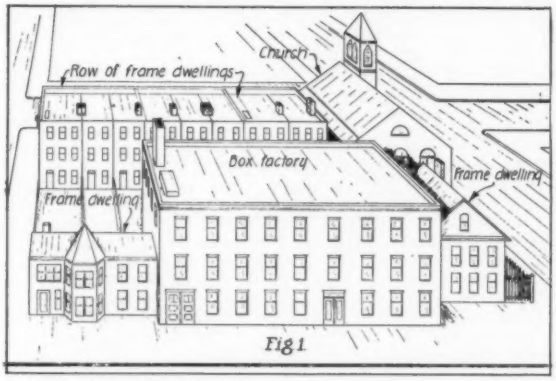


Fig 1

A second alarm brings out Engine Cos. Nos. 4, 5, and 6; Hose Co. No. 1 and Ladder Co. No. 2—with an aerial truck.

Third alarm calls out Engine Cos. Nos. 7, 8, and 9; Ladder Co. No. 3, equipped with a city service truck.

A general alarm calls out, in addition to the preceding apparatus, Engine Cos. Nos. 10, 11, and 12; Hose Co. No. 2 and Ladder Co. No. 4, equipped with aerial truck.

As noted in the description of the fire and the method employed in fighting it, when the department arrived the box factory shown in Fig. 1 was fully ablaze. Twenty minutes after the alarm was received fire was coming out of all windows.

Delay in getting to this fire was largely responsible for the headway made, as the apparatus was called to two different points at the same time and both somewhat distant from the fire.

Suggested Method of Handling Fire

It will be assumed that the fire in the box factory was well advanced when the apparatus rolled in. It will further be assumed that the stage of the fire is such that lines cannot enter the building, but that all operations will have to be carried on from the outside.

In view of the highly inflammable occupancy, and the advanced condition of the fire, a severe exposure hazard will be present on three sides, and across the street from the factory as well.

Large streams will be needed in order to effectively cover exposures, for it may be necessary to back the lines away a distance from the fire. Such streams will also be required for effective operation on such a hot fire and where the lines must be operated from the street.

It is possible that the fire can be handled with the six engine companies and two ladder companies, and one hose company which responded on the two first alarms, from different points. All of these companies were available at the fire shortly after arrival at the respective boxes which were pulled.

The assignment of lines are as follows: Engine Co. No. 1 to be placed as near to the fire as convenient and two lines stretched to either a deck gun or to a play pipe to be operated on Logan Street. A 1½-inch nozzle will be satisfactory for this service. Men from the ladder company or from the hose company should be employed in getting the two lines stretched.

Engine Co. No. 2 also to be placed at a convenient hydrant and two lines stretched to another pipe, located likewise on Logan Street in front of the factory.

The second of these pipes should also be 1½-inch. They will be sufficiently large to operate on the fire with good force and at the same time cover the exposure across the street.

Engine Cos. Nos. 3 and 4 each to stretch two lines, and each company to supply a 1½-inch play pipe. These pipes should be placed at the rear of the box factory, either in the court, if such is available, or else at other suitable points. These two heavy streams can easily cover the exposures at the rear and possibly operate in onto the fire

With these 1½-inch nozzles in operation there is little reason why the fire should extend beyond the box factory either front or rear.

Engine Cos. Nos. 5 and 6 each stretch in a single line to be equipped with 1¼-inch nozzle, both of these lines to operate on the Logan Street side, one to cover the frame dwelling at the right and the other the frame dwelling at the left of the box factory.

Both will be available for operating on the fire in the event that the heavy play pipes bring the fire under control or reduce it in intensity.

If necessary, either or both of these last two lines can be stretched to the rear of the factory to cover exposures at that point

If fire appears to be beyond the control of six engine companies or seems to be spreading, no time should be lost in transmitting a call for additional apparatus. The condition of the street, with the snow fall, may hinder the arrival of other apparatus, so that an early call is most essential if additional machines are to be put in operation.

The chief point about this fire is the necessity for using large streams rather than small ones. This applies to covering exposures as well as to operating on the fire.

New Type Box Placed in N. Y. Theatres

The New York fire department is placing a new type fire alarm box on the stage of all theatres which have members of the uniformed force on duty. This box is equipped with a testing unit so that a test call may be sent to fire alarm headquarters.

The majority of these units are equipped with a push button on the side, and the units that are not so equipped are being rapidly replaced. A key, similar in construction to the key used in winding mantel clocks, is furnished. In sending in a test call, the following procedure is used.

The key is inserted in the slot provided for it, and with the thumb of the free hand, the button on the side of the unit is pressed. The key is then turned as far as it will go, and with the ear close to the box, the fireman will listen for the sounding of the mechanism and for the "2-3" reply. Following the reply signal, the button and the key are released. In the event

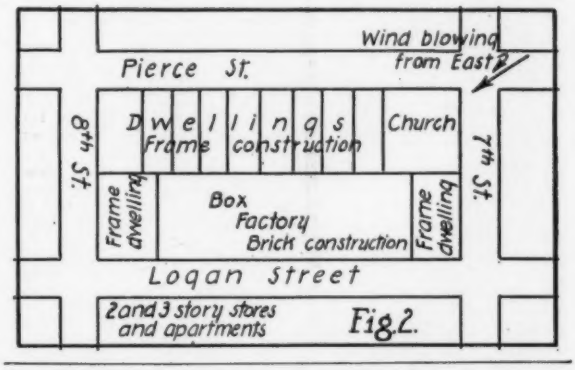


Fig 2.

that no reply is received to the test call, the fire alarm headquarters are immediately notified.

One key is furnished for each box and the fireman upon completing his theatre detail will return the key and the theatre detail badge to his commanding officer. Where the old type box is used, the signal will be sent in on the Morse key in accordance with the instructions printed on the box. In the event of fire, the glass is broken on the front of the box and the alarm is transmitted in the usual manner.

GAS EXPLOSION WRECKS TANKER UNDERGOING REPAIRS IN DRY DOCK

Accumulation of Gases in Oil Tanks Is Ignited by Acetylene Torches of Workmen—Foam Extinguishes Flames

AN explosion which wrecked the Norwegian Tanker "Mantilla", from Tonsberg, Norway, and caused the death of at least nine men and the serious injury of many others, occurred at the Bethlehem Shipbuilding Corporation, Sparrows Point, Md., on November 19, at about 11:45 a. m. The vessel was undergoing repairs in drydock. The blast, which blew off the deck of the tanker, set fire to the vessel and showered the neighboring docks and structures with debris, one piece of steel 30 feet long, eight feet wide and weighing several tons being carried to the deck of the steamer Mount Clary, in an adjoining drydock.

Chief August Emrich, Baltimore, Md.

The scene on the deck of the vessel directly after the explosion was described by eye-witnesses as terrible, parts of bodies and living men, bleeding from wounds where legs or arms had been torn off, were lying mixed with the debris on all sides. Fire started by the blast was belching from the huge hole blown in the deck, threatening at any moment to cause other explosions, and finish the work of the first one.

The private plant brigade of the ship-building corporation attempted to extinguish the blaze, but quickly found itself outclassed, and immediately called for assistance from Baltimore. In answer to this appeal, Chief Emrich sent a fireboat and a pumper both equipped with foam fire extinguishing apparatus which made quick work of the fire which followed the explosion.

One of the workmen of the ship-building company, who was in the engine room of the Mantilla when the explosion occurred, thus described the condition he met, when he emerged directly after the blast: "The ship reared and plunged like a horse and seemed to lift ten feet from the dock. I made my way to the deck and saw men running around with their clothing on fire and crying. Some of them had their arms off and some lay on the deck with legs and heads cut off."

This man, while assisting some of the injured in the bow of the steamer was cut off from escape by the flames. He slid down to the dock by means of a rope.

Referring to the explosion and the part that the Baltimore Fire Department took in handling the resulting fire, Chief Emrich writes to FIRE ENGINEERING:

"An explosion and fire took place aboard the Steamship Mantilla while in drydock of the Bethlehem Shipbuilding Corporation, Sparrows Point, Maryland, at about 11:45 a. m., November 19, 1926. The plant is not within the corporate limits of the city of Baltimore, and the private fire-fighting force of the company immediately endeavored to extinguish the same, but finding it gaining in magnitude the fire department of Baltimore was called upon for assistance. The Fireboat Torrent, which is equipped with Amdyco system, together with Chemical Company No. 1, a Foamite pumper, and several officials of the department were sent immediately.

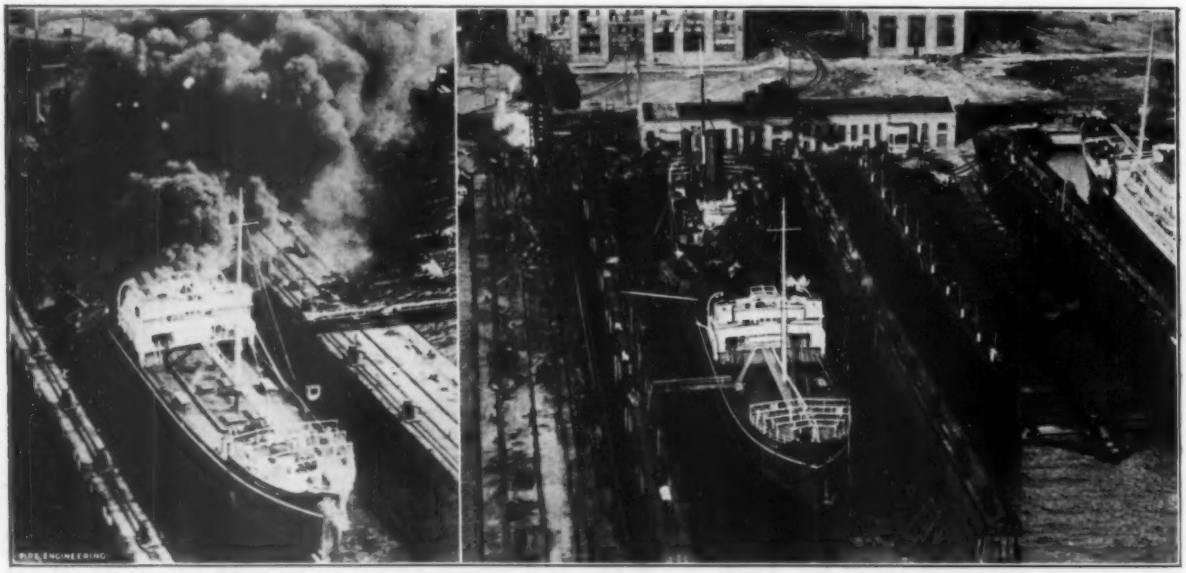
"Upon arrival of departmental equipment it was found that the fire had gained great headway and there was likelihood of additional explosions aboard vessel from fumes. The department proceeded with its extinguishment by the use of Foamite and Amdyco systems. The Foamite and Amdyco were very effective and the fire was extinguished in from ten to fifteen minutes after arrival of departmental equipment. Considerable damage was done to vessel.

"The cause of fire as reported by one of the officers of the Steamship Mantilla in a statement made publicly was: 'I was standing on starboard side of floating drydock and looking down at two men operating Acetylene burners and two caulkers when I heard an explosion which sounded like a cannon and then a ball of flame. I ran up the dock to shore and when a piece of iron hit me on the left leg I fell. Men then came from shore end of dock and took me to land.'

"I have no doubt as to the correctness of statement and cause of fire, as quite an accumulation of gases were contained in the tanks.

"After the fire was extinguished, I was requested to make an inspection of the vessel for the purpose of securing information as to the effectiveness of the Foamite and Amdyco systems, and I noticed at the time that the fumes were very strong and directed that every precaution possible be taken to avoid further explosions aboard the vessel."

The report of Battalion Chief Edgar B. McKnew, head of the fire prevention bureau of the Baltimore Fire Department, gives



Left View, Courtesy of Chief Emrich; Right, Courtesy, Baltimore Evening Sun

Left, Fire in Tanker "Mantilla," Following an Explosion from an Accumulation of Gas in Oil Tanks, which Blew Off the Deck. Right, After the Explosion and Fire, Showing the Great Damage Inflicted on the Ship.

his personal opinion of the cause of the fire, and is of interest. This report is as follows: "In company with Capt. W. H. Jones, I inspected the S. S. Mantilla, Bethlehem Shipbuilding Corporation, Sparrows Point, and find that explosion had occurred in the cargo fuel oil tanks at center of ship. The force of the explosion opened deck and starboard side a distance of at least 125 feet, raising deck and pushing out starboard side. The force of explosion was so terrific that it actually tore 5/8-inch steel sheets. The explosion caused oil to be thrown around on deck, port side and over deck of ship, also scorching paint on lifeboat an dwoodwork on deck. At center of port side, at two places, rivet holes showed which has been burned out by acetylene torches. In my opinion the burning out of rivets built up an explosive gas in cargo hold and reached the right temperature, which caused explosion on ship."

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the periods designated in the headings. These figures, compiled from telegraphic reports, are based on estimates made at the time, and are subject to later investigation and consequent revision. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousands.

Week Ending November 26

SALEM, MASS.—Office building and glazing dept. of Pitman & Brown 30
CUSHING, OKLA.—Cushing Refinery of Empire Companies..... 440
SARANAC LAKE, N. Y.—Property of Jenks estate destroyed... 25
CONNELLSVILLE, PA.—Newmyer Opera House destroyed..... 85
MILWAUKEE, WIS.—Plant of Shellmar Products Company damaged 210
SUPERIOR, ARK.—Transformer substation of Magna Copper Company 85
WILMINGTON, DEL.—New Castle plant of Penn Seaboard Steel Corp. 25
CRESCENT CITY, FLA.—Packing plant owned by Lawrence Gentile 65
MONTICELLO, MISS.—Planing mill of Lovell Lumber Company damaged 25
BELMONT, N. C.—Princess Theatre and other property owned by W. T. Robertson..... 25
LAWRENCEBURG, TENN.—Property owned by Mrs. R. E. Wilcoxson 35
HOUSTON, TEX.—Alamo Steel & Supply Company building... 50
CLEVELAND, OHIO.—Grain elevator of Fairchild Milling Company damaged 180
MINNEOLA, KAN.—Mercantile Store of W. A. Smith destroyed. 35
NEW CASTLE, DEL.—Two buildings of Penn Seaboard Steel Corp 25
WILKES BARRE, PA.—Car and blacksmith shop, No. 6 colliery, Pennsylvania Co., Glen Lyon..... 35
CARLISLE, PA.—Mulgrew Bakery damaged..... 25
PAWTUCKET, R. I.—Paint shop of F. H. White destroyed.... 45
HIGHVIEW, N. Y.—Shawanga Lodge destroyed.....125
NIELSVILLE, MINN.—Potatoe warehouses of Leonard, Crosset & Riley 65
BURKBURNETT, TEX.—Property of Hunt-Rigsby Company.... 25
EL CAMPO, TEX.—Elco Feed Plant and Weaver Grain Store destroyed 170
WAYNESBORO, GA.—Masonic Temple..... 30
MUIRKIRK, MD.—Chateau Le Paradis on Washington-Baltimore Pike 175
ROSCOE, ILL.—Three buildings in business district destroyed.. 45
REIDSVILLE, N. C.—Plant of Reidsville Motor Company damaged 25
SEYMOUR, TEXAS—Seymour Cotton Oil mill damaged..... 35
PEORIA, ILL.—Plant of Peoria Journal Transcript and adjacent property 70
HUDSON, N. Y.—Farmers' National Bank Bldg. and Harder Block destroyed 210
REGINA, SASK.—Main warehouse of Saskatchewan Liquor Commissioner 85
BELLINGHAM, WASH.—Warehouse of Utah-Idaho Sugar Company damaged 85
DEFUNIAK SPRINGS, FLA.—Baptist Church damaged..... 25
AVERY, TEXAS—Medford Brothers store building..... 25
BLAIRSVILLE, PA.—The Josephine Supply Company Store at Josephine 40

Week Ending December 3

DALLAS, TEX.—Sanders Brothers' garage destroyed..... 80
LAREDO, TEX.—Store of Franklin Brothers..... 85
OJUS, FLA.—Hotel, department store and barber shop destroyed 25
QUEBEC, QUE.—Shoe factory owned by Pierre Bertrand, damaged 45
BEDFORD, N. Y.—Bedford House on estate of Arthur Iselin... 125
WILKES-BARRE, PA.—Property of F. B. Mathewson Company destroyed 850
PINEVILLE, KY.—Tipple and power house of White Star Coast Co. 70
FREEPORT, ILL.—Third Ward Public School building destroyed. 40
QUINCY, ILL.—Drug store and delicatessen damaged..... 85
NORTHLAND, MICH.—Six buildings destroyed..... 45
VAN WERT, OHIO.—Van Wert Times building..... 25
BLYTHEVILLE, ARK.—Plant of the Arkansas Grocery Company destroyed 65
FAIRFAX, S. DAK.—Several business establishments damaged.. 35
SHINNESTON, W. VA.—Plant of Paquet Glass Company destroyed 65
RUDD, IOWA.—Miller & Loper Store, Ervay Restaurant destroyed 35
KINGMAN, ARIZ.—Shaft of Big Jim copper mine owned by U. S. Eastern Milling Company, damaged..... 25
MINNEAPOLIS, MINN.—Warehouse of Skellett Company, 251 6th Ave..... 85
ADA, MINN.—Flour and feed mill and elevator of Ada Milling Co. 30
ABERDEEN, S. D.—Ward Hotel, Bouchard Dept. Store and other business establishments damaged..... 255
BRUNSWICK, GA.—Ice Plant of Brunswick Canning Company, destroyed 25
TOLEDO, OHIO.—Property of C. A. Mauk Lumber Company 170
PORT ORANGE, FLA.—Buddington & Austin Lumber Mill.... 85
WRIGHTSVILLE, GA.—Brown Memorial Church..... 35
POTTSVILLE, PA.—Boiler house of Otto Colliery, owned by Philadelphia & Reading Coal & Iron Company..... 300
MASON, ARK.—General Store of S. N. Pitzele destroyed..... 35
TAUNTON, MASS.—Park Theatre and Rogers Silver Company plant 800
FORESTVILLE, N. Y.—Several buildings on farm of C. E. Willis 35
EAST ST. LOUIS, ILL.—Gain-Hurley Lumber yard damaged to extent of 300
MUNCIE, IND.—Garage and 8 automobiles of Kuhner Packing Company 40
NASHVILLE, TENN.—Paving Plant owned by the City of Nashville destroyed 40
RALEIGH, N. C.—Residence of Mrs. K. D. Raney destroyed.. 40
STEELTON, PA.—Orphanage of the K. K. K. near Paxtang, damaged 40
SHARON SPRINGS, N. Y.—Sharon House, Grossman Theatre and adjoining property..... 140
TORONTO, ONT.—Myers' Lumber Company, north of Forest Hill Hill village..... 125
HATTIESBURG, MISS.—Plant of Currie-Paxton Company, destroyed 50
CARY, MISS.—Sawmill of Gelgrade Lumber Company destroyed 45
CHARLESTON, ILL.—North Dails Apartments destroyed..... 45
BAY ST. LOUIS, MISS.—Residence of Mayor G. Y. Blaize.. 30
SEDALIA, MO.—Baptist Memorial Church..... 25
LEIPSIC, OHIO.—Plant of the Tempco Manufacturing Company 250
LOS ANGELES, CALIF.—Plant of California Stucco Products Company 40
RYE, N. Y.—Property of Glen Oak Realty Company, Boston Post Rd. 40
BRONX, New York, N. Y.—Cromwell Garden Apartments..... 75
ASTORIA, L. I. N. Y.—Warehouse and garage of Gallery Furniture Co. 210
CANNELTON, IND.—Several business establishments destroyed 65
DEDHAM, MASS.—Building on estate of G. C. Willard destroyed 25
LOWELL, MASS.—Albert E. O'Heir furniture store..... 65
LENOIR, N. C.—Plant of the Bernhardt Chair Company destroyed 220
GREENVILLE, S. C.—Palmetto Bldg., owned by Chas. McAllister 25
HAMMOND, N. Y.—Apartment building damaged..... 50
CLEVELAND, OHIO.—Grain elevator and feed plant of Herrman-McLean Company 85

Fire in Historic Home Causes $150,000 Loss

Fire in the old home of John Jay, first Chief Justice of the United States, located at Bedford Hills, N. Y., caused a damage of $150,000. The home was built 144 years ago and it has been occupied by his descendants since that time. The house contains forty rooms, several of which are fireproof, but the fire apparently started in one that wasn't. Ten fire companies were summoned but hampered by wind and lack of water, they were unable to do more than move out several pieces of antique furniture. The third floor of the north wing was wrecked and part of the second floor was also destroyed. The loss was covered by insurance.

Electric Siren Purchased for Griswold, Ia.—A new electrically operated siren has been purchased for Griswold, Ia. It will be operated from the telephone exchange.

Milford, N. Y., Plans for New Fire Station—Plans are being drawn for the erection of a new fire station in Milford, N. Y. Homer Gardner has been appointed chief of the company and plans are being made to incorporate the company.

New Rules New York Fire Department

(*Continued from page* 1251)

of 120 pounds to the square inch, and the engine must be turned over each day and placed on a different centre. If the engine has not been out of quarters for four weeks, it shall be connected to the hydrant in front of quarters. Steam shall then be generated in boiler at a pressure sufficient to show that the safety valve and all parts of the engine are in good working order, including the automatic relief valve. The main pumps shall be tested; the water level in the gauge glass shall be increased and the steam pressure diminished to 40 pounds. The boiler shall then be blown down and filled up by using the blow-off cock and lower heater connections as well as surface blow-off cock until the water shows clear in the gauge glass. If practicable, the water leg of boiler shall be cleaned by removing mud plugs and flushing with small hose.

Every three months they shall disconnect the line pipes leading from the engine boiler to the heating apparatus, blow water through the coil to remove accumulations of scale. Once each week they shall remove the plugs of circulating cocks and tallow them.

SEC. 100. The relief valve in the main pump shall be set to lift at a pressure of 75 pounds to the square inch. Should this pressure be insufficient for the work required (such as forcing water through a long line of hose, or to a pipe in an elevated position, or when required to give the full power of the engine), the pressure shall be increased by order of the commanding officer. Under such circumstances, the churn valve and the sprinkler shall be closed, the relief valve cut out, and the pipemen shall be notified of these facts.

If a controlling nozzle is used while the engine is being operated in this condition, the company commander shall not permit the nozzle to be shut off until his order to reduce pressure at the engine has been complied with.

SEC. 101. When arriving at the scene of fire duty, they shall connect the suction or hydrant connection to the hydrant and then to the engine, making tight connections. While the engine is operating they shall frequently note the variations of pressure in the hydrant for the subsequent information of their company commanders.

When reporting on additional alarms, they shall use the suction connection. When engaged in operations in connection with fire duty, they shall give their undivided attention to their work, avoiding particularly unnecessary conversation.

SEC. 102. Upon returning to quarters from fire duty, the fire shall be drawn from the fire box as soon as possible, and the grate cooled off with water from tin cups or brooms supplied by pails.

SEC. 103. When the apparatus is placed in a position to draft water, the suction joints and connections shall be spanner-tight, the feed valves from the main pump closed, and the churn valve seated. The relief valve shall be cut out, the air valves on top heads of pumps shall be opened before starting engine, and the boiler shall be supplied with fresh water from a line of hose. If this is impracticable, it shall be supplied with salt water. When the pumps are thoroughly primed, the air valves on top heads of pumps shall be closed.

Upon returning to quarters after using salt water, the engine shall be connected to a hydrant and the main pump thoroughly flushed.

SEC. 104. They shall see to it that the crank case, fuel pans, gasoline tanks, oil cups, and oil cans of apparatus are filled in quarters.

SEC. 105. Members assigned to operate gasoline pumping engines shall comply with all rules relating to care and operation of apparatus.

General Rules

SEC. 106. The two-platoon system shall remain in full force and effect, subject to the group schedules promulgated on and subsequent to June 13, 1919, and to the power vested in the Fire Commissioner and Chief of Department.

The tours of duty each day for the platoons shall be:

From June 1st to September 1st:

8 A. M. to 6 P. M.
6 P. M. to 8 A. M.

From September 1st to June 1st:

9 A. M. to 6 P. M.
6 P. M. to 9 A. M.

SEC. 107. In carrying out the requirements of the two-platoon system, Chiefs of Battalion and company officers shall exchange tours on the second day following the first fourth regular leave of absence in each month.

Engineers of Steamer shall exchange tours on the second day after the first fourth regular leave of absence in each month, in addition to one fireman from each platoon who is scheduled to change tours on the same day.

Tours of duty cannot be exchanged, under any other circumstances, except with the permission of the Chief of Department.

(See reports—Change of tours)

SEC. 108. When the platoon system is temporarily suspended, the following instructions shall be carefully observed, in conjunction with the instructions contained in General Order No. 1, 1925:

1—Meal leaves shall be granted as provided for under "Leaves of absence."
2—All members in quarters shall respond to alarms, except those actually on housewatch.
3—When the number of beds is not sufficient for the accommodation of all members, Company Commanders shall arrange a schedule so that their use will be equalized. Bed linen shall be changed, when possible, before beds are to be reoccupied by other members.

SEC. 109. Officers shall be just, dignified and firm in their intercourse with subordinates in rank. They shall see that all rules and orders are carried out and obeyed and shall promptly report, by well sustained charges, every transgression of law, ordinance, rule or order.

SEC. 110. Chief Officers and Company Officers shall be held responsible for the manual strength of companies reporting at fires, in accordance with the schedules promulgated.

SEC. 111. Members designated to perform, temporarily, the duties of a higher rank shall be accorded the obedience, respect and courtesy demanded, by these rules, for the higher rank.

(*To be continued*)

John A. Smith, of Eureka Fire Hose, Dead

John A. Smith, manager of the Philadelphia branch of the Eureka Fire Hose Manufacturing Company, died on November 22 following an appendix operation on the previous Thursday.

After being stricken on the road, Mr. Smith entered the National Stomach Hospital at Philadelphia, for the appendix operation. The cause of his death was general peritonitis and the contributory cause gangrenous appendicitis. Funeral services were held at Mahoney Plane, Pa., on Friday, November 26. Mr. Smith was well liked by all with whom he came in contact, his attractive personality and sterling qualities winning him a host of friends. He is survived by a widow.

Mr. Smith entered this company's employ on January 1, 1908, as a salesman and he was promoted on March 1, 1918, to manager of the Philadelphia, Pa., branch. The chiefs and others who attended the convention of the International Association of Fire Chiefs at New Orleans, this year, may have had the opportunity of meeting him at the exhibit of this fire hose company.

At the convention, he appeared in excellent health, and the news of his death will therefore be a great shock to the many friends that he has made in the fire-fighting profession.

The Late John A. Smith

Russian Firemen Must Have More Fires

In conformity with the motto of the Soviet Russian government, "unless a man works neither shall he eat," some of the firemen in a Russian village started setting fires in order to increase their earnings.

Previously the men petitioned for a regular salary but the Soviet pointed out that the fires were too infrequent to warrant such an expense. The men argued that the few fires were due to their vigilance but to no avail. The men then commenced setting fires in order to increase their pay of twenty-five cents per hour of fire-fighting. Investigation discovered the firemen who committed the arson, and when brought to trial they mumbled, "Firemen can't live without fires."

Biddeford, Me., Celebrates Apparatus Arrival—A banquet was held in the central fire station of Biddeford, Me., on November 16 to celebrate the arrival of a new Ahrens-Fox aerial ladder truck. Chief Eugene Ricker made an address, and among the guests who were at the banquet were Chief Burnham of Saco, Me.

INDUSTRIAL PLANT PROTECTION

WHAT A FIRE BRIGADE SHOULD BE

W. P. NEISTER, Southern Railway.*

A fire brigade should be a receiving set and a broadcasting station, minus static, properly coupled, charged, tuned and operated; selecting only the best material (personnel) available, dependable, steady, sober, industrious and interested that the reception may be clean, effects beneficial and the results permanent. Broadcasting the ever present danger of fire and the exceeding importance of fire prevention by Station B A N G (Behold a Noted Gang).

A successful brigade must have a periodical practice, snappy and business like. Make an actual or mental survey daily of their own and immediate territory, keep fixed in mind thoroughly the fire alarm signals so that should fire break out at any point in their charge they know in a moment the nearest fire alarm station, fire hose, hydrant and ladders and decide on the most effective attack, but never allowing a necessary change in the plans or attack to cause a breakdown or weaken their determination, but make it fast, furious and feasable, and should the property in their charge be in danger of becoming involved by the other fellow's fire, they should be in a position to avoid such by knowing in advance the best locations to take, then resist to the limit the invasion of the common enemy.

A fire brigade should constitute a compact, harmonious and congenial personnel, having absolute confidence in each other so that should a supreme test or just a minor duty be required, the brigade will say, "We know it will be done." If there is not that loyalty or "Gang Spirit" something is wrong and the officers must locate and separate the drones or excess baggage from the real firemen. Each man should be determined to make his brigade superior. That requires harmony, unity of purpose and action, team-work, all work. The best way to have a banner brigade is give attention to fire fighting problems and fire hazards ALL THE TIME, not just once a week or as a mere incident. If we do not mean business, we misrepresent the thing. Get off before we are bumped off.

Can the Chief or other officers talk to you in a straightforward businesslike manner, give orders, information or a pointer to improve the service, also make you a better fireman, and you take it to heart, accept it like a man and obey like a good fireman, or do you argue, question, or get raw? Don't you know a fire brigade is not a debating society, sewing circle or fishing club? But—by all means have a council of war occasionally, look and talk over the problem, exchange ideas, tighten up the loose places and eliminate any short circuits that may exist. If you cannot come along down the line with the boys, the quickest that you can get out will be too slow.

If you use or find an extinguisher empty, never put back in place until recharged, but leave it upside down, notify Chief or Captain immediately. Should you find any fire fighting equipment out of place, out of order, or used for other purposes, inform the proper authority at once. NEVER take anything in connection with fire protection on a guess, be prepared. Should you discover and put out a fire while Chief or Captain is absent, make prompt report to them, giving the hour, location, cause, extent of damage and any other information you may have, so that a prompt, intelligent and full report can be turned in.

The Fire Inspector. What manner of man is he? One that his employer, the brigade and fellow-workers have respect for, and confidence in, be it the General, District or Local Inspector. He is a genial fellow, a good "mixer," diplomatic and democratic, glad to give and happy to receive information. The supervisors and all should be glad to see him. Not consider him a noisy nuisance, bluff, bully or bunk. In getting fire hazards corrected, he gets better and permanent results by kind coaxing and pleasant methods, but if necessary, he will invoke all the authority at his command to have necessary corrections made. He is so thoroughly saturated or superheated with the art or science of inspecting that be it in a synagogue or shed, home or hotel, Pullman or Ford, he is "Always looking." It is a part of his nature, or the sixth sense. Those keen eyes miss nothing from a rat hole to the furnace smoke stack. A ceaseless hunt for the fire hazard, figuring on protection and is a walking encyclopedia when it comes to the question of protection. He knows "A burning structure is a burning shame."

Mr. Chief, Mr. Assistant Chief or Captain, since you are considered "Lead Men," it is necessary that you be intensely interested and always show the "Boys" that you really mean business, wide awake and prompt, ever ready to lead in any manner or means that will result in improving the efficiency of the brigade. If you display a careless, indifferent interest, tardy in the discharge of your duties, lacking that "snap" and "vim" required to maintain a good, dependable and proficient squad of fire fighters, you better resign that job, you may get run over. If the "leader" does not really lead, "Put him out." Do you call on your men to make a diagram of their territory, giving location of buildings, fire alarm station, fire hydrants, equipment, etc.? If you cannot do it yourself, "get busy" or get out.

* Railway Fire Protection Journal

HUMAN ELEMENT IMPORTANT IN THE FIRE FIGHTING FIELD

Intricate Mechanisms and Appliances Useless Unless the Human Element Is Considered in the Plans Made

By L. F. WILCOX*

TO those outside of the Fire Protection fraternity any large expenditure such as a sprinkler installation or hydrant system brings with it a feeling of security that danger of fire at that particular point has been reduced to a minimum. As a matter of fact, our security even then hangs upon that slender thread known as the human element.

A few months after installing a sprinkler system in a railroad property at a cost of approximately twenty-seven thousand dollars, it was discovered that some of the heads had been removed and the holes plugged. Upon being asked the reason it was explained that those particular heads let go on account of the heat so it was thought best to plug them.

At the same plant the watchman was being questioned as to his duties. He was above the average intelligence of his class but when asked what he would do in case a sprinkler alarm operated, answered, "Shut off the water, of course." Being further questioned as to why the company had gone to the expense of installing sprinklers if only to shut off the water when one opened, he replied that he had never given the subject any thought.

The watchman who frankly admits that he saw a small blaze or heard a suspicious sound but could not take the time to investigate because he "had to ring in his boxes" is probably too common to mention. At one large plant it so happened that the watchman's hours overlapped those of the Shop Fire Chief. Discovering a small blaze, this watchman without turning in any alarm spent considerable time hunting up the Chief to tell him about the fire, insisting that it was the Chief's job, not his, to put it out.

At another repair shop a fire drill was run off perfectly except for the fact that a certain colored porter, who was supposed to bring an extinguisher to the scene of action, failed to show up. Upon being questioned he said that he had heard the alarm but did not respond because it was "not Saturday" (the usual day for fire drills).

All such things, however, are not confined to the "rank and file." Imagine a Master Mechanic who made a practice of relieving his well-trained shop brigade with laborers as soon as the fire was thought to be under control, in order that the higher rated men would not get any overtime.

We often think that the gasoline problem is solved when we furnish a safety can, but more than one man has been caught using his can for storage purposes only, and cleaning in a pail or bowl full of "gas."

A printer at a large railroad hotel was discovered using his safety can as ordered but also keeping a glass bottle full of gasoline on hand so that he would not have to go out and get the can filled twice a week.

Many people do not even appreciate the fact that a chemical extinguisher must be charged to be effective. At a non-agency station one of the soda and acid type was found empty in a closet. The caretaker explained that it would freeze if filled so he had everything in readiness to charge it immediately upon alarm of fire.

A steamship company had rented space in a large railroad

*News Letter of the Railway Fire Protection Association.

pier. At the first inspection several pasteboard cartons were noticed nailed on the walls. Upon investigation, these were found to be charges for soda and acid extinguishers, hung up in the belief that they were dry powder extinguishers.

Many other cases could be cited but they would all bring out the same point, that we have only gone part way when we have simply furnished the mechanical appliances.

Newark, N. J., Offers Fire Course

A notice has been sent to all employers in the area of Newark, N. J., by the Newark Safety Council, urging the company to send members of plant brigades and those in a supervisory capacity to attend a course in fire prevention planned by the council. All of those who attend four out of the five sessions will be awarded a graduate certificate.

The following is a list of the subjects that will be covered: What is the real cost of fire—who pays? Good housekeeping, proper construction, fire breeders and conflagration centers in industries and homes. Automatic sprinkler systems and how to care for them; the watch service—what, how and who. Fire exits and escapes; hand extinguishers and what they will do. The fire bug extermination campaign; why fire prevention and fire protection.

No fee is charged for the course and an attendance card is furnished the employer showing the record of those whom they have designated to attend the lectures. The course will be addressed by experts from the insurance, industrial and consulting engineering field.

Need of Uniform State Fire Prevention Laws

(*Continued from page* 1250)

munities alone, but should also apply to counties and to the state as a whole, particularly so during this period which might be well termed the "age of individual building codes," as it would, in a small measure, insure a somewhat reasonable quota of construction along the lines of fire prevention and public safety, particularly in public assembly halls, sanitariums and schools.

Some people think that insurance is the solution of the problem, but when it comes to the question of human life, this is not the case, neither is the idea sound economically, for in California, as in many other states, steps must be taken to safeguard the natural resources before it is too late. We cannot build houses without lumber, we cannot have lumber if we don't protect our forests; water is essential, the forests are our water supply; if we let our houses burn down through inadequate protective legislation, we are just further depleting our already diminishing lumber supply by the erection of new structures to take their place.

Care in Formulating Building Codes

The only effective way to cope with the situation, as I see it, is by state legislation, but when a building code is considered for enactment, extreme care should be taken to see that it is not voluminous but that it contains the essential points of fire protection as applied to buildings and control of fire, through the providing of proper construction and necessary appurtenances or adjuncts for fire department work, together with the installation of proper apparatus for protection by automatic means. This latter phase is an often neglected point in safety exposure hazards.

The passage of such an act will require crystallized, concentrated effort throughout the whole of a state and the Firemen's Association—and there is one now in almost every state—situated as it is, with its membership, from all parts of the state, composed of trained men vitally interested in the subject, is to my mind the logical organization to undertake this work.

Modern Fire Alarm Signaling

(*Continued from page* 1254)

use a push button wired so that it reverses the polarity of the current going into the controlling unit, thereby allowing it to ring a separate bell or siren and a code number given designating the street the apparatus is to turn down and permitting the police to have the way cleared for it to enter. For instance, assume that we have a street going north to south and the proper signals have been given to allow the police to clear it for apparatus to proceed along. In the center of the avenue or street the apparatus is to turn down or up as the case may be; the streets are given numbers say, in this case their are four streets crossing the main artery 1-2-3 and 4; if apparatus is to turn down the first street the siren is sounded once a medium length blast and if they are to go down the street, a pause will follow and the siren will sound once again letting the police officer know that they are to go down the street and he can arrange traffic to suit the occasion. If the apparatus is to go up the third street the siren is sounded three times giving medium length blasts and a short space after which two blows are given letting the officer know that the apparatus is to go up the street and he can arrange the traffic to take care of this condition.

There are very numerous ways of arranging a traffic warning system, and the system decided upon should be worked out well on paper before setting up any equipment, as otherwise there may be various changes before the system is completed. It is very important that the heads of the fire and police departments be taken into this work along with the signal department so that the best suggestions will be brought out with a good discussion of the tentative plan of the systems.

In Figure No. 44 a flashlight unit is shown and serves to give a visible warning to the pedestrian and autoist alike, of the approach of the apparatus. If it is planned to use a light and siren, it is best to have the light of the flashing type as it will attract the most attention. The flashlight can be controlled by the same unit that controls the siren and works on the polarized principle. When installing the lights be sure that you place them where they will be easily seen at all times. The best method, where conditions permit, is to suspend them so they will hang directly over the center of the street. If it is impossible to place them there, they can be mounted on the side of a wooden pole or box standard or any place where they will be elevated enough to be seen easily. There are a good number of cities which have their traffic units hooked up so that the street traffic units are all set in a stop position and showing red. This is a good idea and serves to stop the flow of traffic but it does not stop the blocking up of streets that the apparatus intends to turn down, and if anything, it results in more or less confusion.

Troubles and Their Remedies.

Light or siren will not operate.

Controller not working—contacts not breaking in the movement. Adjust the contacts.
Blown fuses in relay case—replace with new fuses.
Relay magnet open—test the magnet and find break if one shows in test.
No power on the 110-volt line—test with a test lamp and learn if power is on; if not have it turned on and left on.
Signal line is open, test with a voltmeter and see if you have current at terminals of relay.

Light and siren stays on after the movement stops.

Controller points fused together, contacts stuck in movement. Make test and see if contacts are stuck together and if so separate and learn cause of the same before replacing with new contacts.
Short circuit in the movement or exterior or interior wiring—test and remove the short after which test the equipment to insure its proper operation.

Siren will not operate but light will.

Siren is out of adjustment—turn back the adjusting screw a turn or two and have a test made, when proper pitch is obtained tighten up check nut.

Siren or bell works but light will not.

Light is burnt out and needs to be replaced.

Light and siren will not operate only infrequently.

Low battery; build up battery to proper voltage.

The troubles incurred with flashlights, sirens and gongs will mostly be of a simple nature and in most cases the remedy will present itself at the same time the trouble is found.

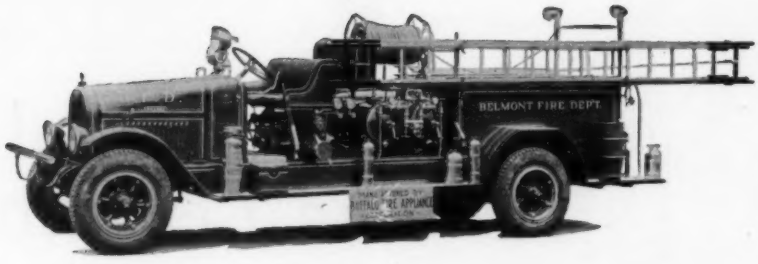
The next article will take up Engine House Equipment, including panel layouts, apparatus such as, gongs, indicators, relays, telephones, etc.

Dog Fight Destroys 2000 Chickens—Dogs fighting in a barn in North Weare, N. H., upset a lantern and the resulting fire destroyed 2,000 chickens.

Bells to Replace Sirens in Akron, Ohio—After January 1, the sirens on the fire apparatus in Akron, Ohio. will be replaced by bells. Chief J. F. Mertz said that sirens were used by other classes of vehicles and other distinguishing means had to be adopted.

Youngstown, Ohio, Firemen Hurt in Crash—Four firemen and a trolley car passenger in Youngstown, Ohio, were injured when a fire truck crashed into a trolley car while on the way to a fire. The apparatus driver found his way blocked by an automobile and by pedestrians waiting for a bus, and rather than crash into either, he struck a trolley car that at that time was standing still.

BUFFALO



When Considering New Apparatus

Remember that BUFFALO equipment is

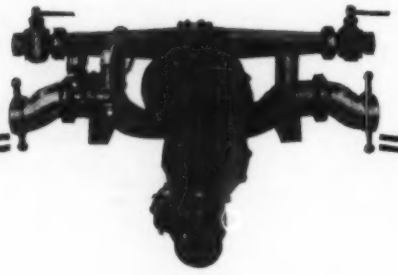
1. Built to Your Order to Meet Your Particular Needs
2. Fully Guaranteed to Do the Work for Which Designed
3. Making-Good and Making Friends Wherever in Service
4. Designed by Experienced Fire Apparatus Engineers
5. Built by Skilled Workmen in a New Modern Factory
6. Constructed of the Finest Materials Money Can Buy
7. High Quality Fire Apparatus at a Reasonable Cost

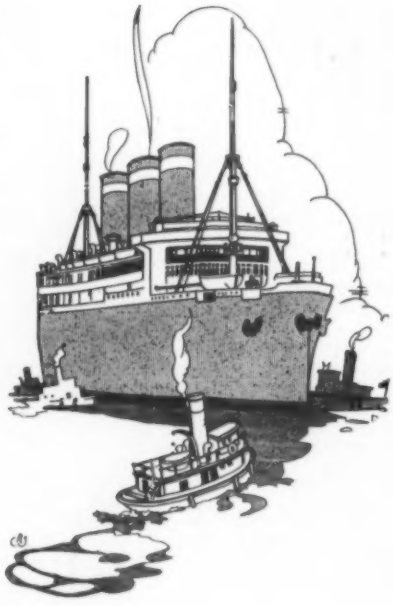
May We Send You Complete Information?

BUFFALO FIRE APPLIANCE CORP.

Main Office and Factory, Buffalo, N. Y.

BUFFALO





On Board *The* Leviathan

DUE to the imposing records of Northerns in fire service and outstanding industrial performance they were chosen for fire protection of the flagship of the U. S. Shipping Board Passenger Fleet—The Leviathan.

This queen of the Ocean depends on two Northern twin foam pumping units for safety from the terror of both land and sea-fire.

Many other prominent marine pumping jobs are handled most efficiently by Northerns. Mr. C. W. Wiley, Chairman of the Board of Directors of the Todd Shipyards, one of the largest in the U. S., is using two Northerns on his own yacht, and writes, "I am very pleased with the pumps and have had no trouble whatever with them since their installation."

This tells the story—Northern Rotary Pumps operate day in day out—and the operators forget pumping worries. Is it any wonder that the confidence of Marine Engineers in Northerns has grown steadily year by year until Northerns now occupy the foremost rank in marine circles?

You can buy this confidence-building pump through 13 Fire Apparatus Manufacturers in the U. S. and many foreign countries. You should have a Northern Pump on your next pumper.

Northern Pumps are doing big things in the industrial world—performing exacting services—establishing records for dependability, durability and efficiency.

Many of the world's largest users of pumps buy Northerns regularly.

Northern Pump ads will tell you interesting, impressive, provable facts of the things that are being done by Northern Pumps that no other Rotary fire pump has done.

This is one of a series of such ads.

NORTHERN ROTARY PUMPS
"MORE GALLONS PER HORSE POWER"

NORTHERN FIRE APPARATUS CO.
902—18th Ave. N. E.
MINNEAPOLIS, MINN.

OF INTEREST TO VOLUNTEER FIRE DEPARTMENTS

Designing the Village Fire Station

The erection of a fire station for the use of a volunteer fire department brings forth problems not encountered in the design and erection of stations for the larger fire department.

In the larger cities, the station may be likened to a place of employment where the paid firemen are stationed while serving their employer—the city. In the small municipality or village, the fire station, in order to attract and hold the young men of the place, it must be a place where the men can meet in the evenings—a place where social gatherings may be held—in other words the building must be a club house.

Therefore while a fire station constructed in the larger cities may serve as a model in planning a fire building for the village, its design should not be followed too religiously as the conditions that prompted its erection are not the same.

On the ground floor, there should be a large space for the housing for the fire apparatus. The doors opening to the street should be sufficiently wide to permit the apparatus to be driven in without any trouble. There should be sufficient space between the door and the apparatus so that the station door may swing inward in the event of fire. There is an important object behind this provision. In the winter time, heavy snows will drift against the fire station door, and as most of the volunteer firemen are then concerned with shoveling paths about their own homes, the snow will have an opportunity of "packing" into a hard mass. When fire does occur, unless the doors are of a type that swing inward, it will be some time before the doors could be opened and the apparatus driven out.

At the rear of the fire station is generally a small room to house the storage battery equipment that operates the signal system. The hose drying tower may be constructed as part of the station or it may be erected as a separate tower in the rear—it all depends on the manner in which the station must adapt itself to the civic needs of the community. In one New York community, a dance hall was constructed in the rear of the station and it served as the assembly hall for the district.

Upstairs there must be a room to serve as a meeting place for the monthly meetings of the company. It may be fitted up as a reading room. and when it is necessary to hold meetings, to arrange folding chairs for the members. There should be a large room where a pool table or two could be placed for the amusement of the volunteers.

A well equipped kitchen is either provided on the first or second floors so that informal parties may be held. It should be provided with as many utensils and dishes as the company funds will permit.

It is far better to disregard the placing of a brass sliding pole and to place wide well designed stairways. Some time when the fire station is used for a community gathering, the children will consider themselves in paradise in sliding down the brass pole, if there is one; the company runs the chance then of having a law suit, in the event that one of the children is hurt.

In one of the up-state, New York communiteis, a heater was placed in a pit in the floor so that it was directly under the engine when the apparatus was in position. By this means the engine was always warm and there was no delay in getting the engine in running order on a cold night.

There is nothing quite so flexible as the design of a fire station for a volunteer fire company. The main object is to house equipment and apparatus that will be used in fighting fires. The secondary object, which may be just as important, is to provide means for recreation for the men so as to compensate them somewhat for the hours that they sacrifice for the protection of the community. Another secondary object, in such a design, is the civic needs of the community.

Does the town need space for the village offices? Does it need a place of assemblage where dances may be held?

While it may sound strange, there is a community on Long Island, where classes are held in the rooms on the second floor of the fire station. In such an arrangement, the children may be just waiting for a fire alarm to break up the monotony of school work.

The one rigid rule to be observed is to get the best that the funds of the company will permit and to consider provisions for the future growth of the place. A well constructed and outfitted building will do more towards obtaining the proper type of men for the membership of the fire department, than any amount of personal solicitation. The buidling should exert a club-house appeal to the firemen, and any amount spent for furnishings and means for recreation will make a worth-while investment.

Running Hose Contest at Lynbrook, L. I., Field Day

This is one of the many contests held at the recent field day of the Lynbrook, L. I., N. Y., fire department. The photograph shows the members of the Vulcan Hose Company winning the running hose contest.

Machine Produces Artificial Respiration

A French concern has placed on the market a machine designed to properly produce, by manual operation, artificial respiration. The appliance is shown in the illustration herewith.

The patient is laid on the machine face downward in such a position that any foreign material in the mouth would fall forward, as well as the tongue, which, due to its weight, frequently obstructs the throat in the event that the patient is laid on his back as in the Sylvester method of artificial respiration.

Machine for Performing Artificial Respiration

After the patient is laid face downward he is strapped to the

device so that he will not slip forward or backward as artificial respiration is maintained.

Once he is in position and fastened, all that is necessary to do is to work the lever backward and forward over his head.

This brings the arms up and down in the proper manner to inflate and deflate the lungs. At the same time pressure is brought to bear upon the supporting belt which collapses the lungs and permits them to inflate at the proper time.

J. J. Kuplic, Chief of Manitowoc, Wis.

James J. Kuplic has been named chief of the fire department of Manitowoc, Wis., by the fire commission, to fill the vacancy caused by the resignation of Chief J. H. Kratz.

Chief James J. Kuplic

Chief Kuplic who is thirty-nine years old, is one of the youngest officials both in the city and in the state. He had been acting chief since November 1 and the appointment now makes his position permanent.

He has been in the service of the local department since September, 1908, when he was appointed as a call man. In May, 1909, he was made a regular fireman and assigned to service as a truck driver; on February 1, 1910, he was appointed lieutenant. Although there was no such position created, Chief Kratz, in 1911, appointed him as assistant. Chief Kuplic has served eighteen years in the department.

When a sleet storm wrecked the fire alarm system in 1922, Chief Kuplic had charge of rebuilding it. Following the passage of a state law in 1913 that the city have inspections as a fire prevention measure, Chief Kuplic was named as one of the local inspectors.

He has spent most of his life in Manitowoc, and no changes are planned at present in the fire department. He is married and has a son and a daughter.

A Possible Solution of the Traffic Problem

The use of the motorcycle taxi with its smaller body than the regular type of cab, may tend to better the great congestion of automobile traffic that is so troublesome to the fire departments. A company has been started in both Baltimore, Md., and in Newark, N. J., for operating a fleet of this type of taxicab. The motorcycle taxi has a capacity of two passengers and it is manufactured by the Indian Motorcycle Company. It is operated by a two cylinder motorcycle engine.

Fire Almost Destroys Old Fulton Fish Market—The historic Fulton fish market in New York city was almost destroyed by fire. A peculiar incident in the history of this old market is that fire brought it into existence. In 1817, legislation was passed for the construction of this market but a number of buildings stood in the way of its construction. One winter night fire swept the entire district of Fulton and Front streets and the obstructions to the project were thus removed.

Chief Aspy Heads Progressive Department

Chief John Aspy, in charge of the fire department at Kokomo, Ind., is very proud of his department and is pleased with the equipment that he has to fight fires. He has been a member of the fire department at Kokomo for ten years of which eight and one-half years were spent as mechanic. For one and one-half years he was assistant chief and on January 4, 1926 he was appointed chief. The department has three fire stations and all Ahrens-Fox equipment. This includes a booster pump, two 750-gallon pumpers, one 75-foot aerial ladder truck and a city service truck. There are forty men in the department.

Chief John Aspy, Kokomo, Ind.

Chief Aspy attended the I. A. F. C. convention at New Orleans in company with the Indiana delegation, and joins with the other fire chiefs in saying that he had a most enjoyable time and he was very much pleased with the hospitality of New Orleans.

Famous Relic in Fire

The wrist bone of Ste. Anne de Beaupré, to which are attributed a number of miraculous cures, was scorched in a fire that destroyed the Shrine of Ste. Anne in the little village in the province of Quebec, Canada.

Many relics of lesser import were found intact but priceless gifts of gold, silver and precious stones received from Kings and Queens, and marvelous church ornaments were destroyed. The famous statue of Ste. Anne was also lost.

Firemen from Quebec traversed twenty-two miles of slippery road but they were powerless to save the basilica; instead they devoted their attention to preventing the spread of the fire. The basilica was a temporary structure and work was progressing on a new building to replace the one destroyed in 1922 at a loss of $1,200,000.

Gamewell Employees Attend Banquet

The annual banquet tendered to its employees by the Gamewell Company of Newton Upper Falls, Mass., makers of fire alarm and police signaling systems, was attended by four hundred members of that organization. The banquet was held at Lincoln Hall, Newton Highlands. V. C. Stanley, president and general manager, greeted the assembly and in turn was warmly applauded by the gathering, many of whom have been in the employ of the company for periods ranging from twenty to forty-five years

After the banquet, an entertainment was given, which was followed by dancing at 9 o'clock. At this time the relatives and friends of the employees joined the festivities. The entire evening was marked by a spirit of joviality and appreciation on the part of the employees.

New Appointments of Eureka Hose

The Eureka Fire Hose Manufacturing Company has opened up a branch office at 601 Hubbell Building, Des Moines, Ia., and it has been placed in charge of S. E. Matheny. His brother, J. G. Matheny, is well known in fire department circles.

Jonas R. Smith has been appointed manager of the Philadelphia office to fill the vacancy caused by the death of his brother John on November 22. Jonas Smith is an overseas veteran of the World War and has been employed as sales representative by the Eureka company since his discharge from the army. He has a wide acquaintance and the number of friends that he has made in the Philadelphia territory will be pleased to hear of his appointment.

Chief Daly, Guest of Boston Fire Association—Chief William F. Daley of Brockton, Mas., was a guest at the Fifty-fourth annual meeting of the Veterans' and Survivors' Association of the Great Boston Fire of 1872.

A New Sterling Product

THE LITTLE GIANT ELECTRIC SIREN

WRITE US NOW FOR FULL PARTICULARS. These Little Giant Electric Sirens fill a long felt need for the small towns and villages where buying a Siren has been delayed due to the high cost of larger sirens.

Here at last is the ideal signal for small towns and villages where Fire Siren protection is needed, but where a big alarm is not necessary.

Note This Low Price

$150.00

The Sterling Little Giant weighs only 82 pounds. It can be installed and wired in a few minutes time. The base is cast iron and the entire assembly is finished in Fire Alarm Red Duco.

Sterling Siren Fire Alarm Company Inc.

61 Allen Street - - - Rochester, N. Y.

Beat the Fire to it with an
Erick Electric Siren

For **Volunteer Fire Departments** in towns of from 300 to 5,000 population, there isn't a Siren or a system in the world to equal the Erick. Night and day—year in and year out—it offers best protection to lives and property.

30 Days Free Trial in Your Own Town

That's our method of proving the Erick Electric Siren to be the fire alarm you need in your town. Place it side by side with the best of all other sirens for 30 days and then be your own judge—decide for yourself whether you want to keep it or not.

"The Erick Electric Siren Shrieks its call of danger to every nook and corner of your town—quick, sure and dependable."

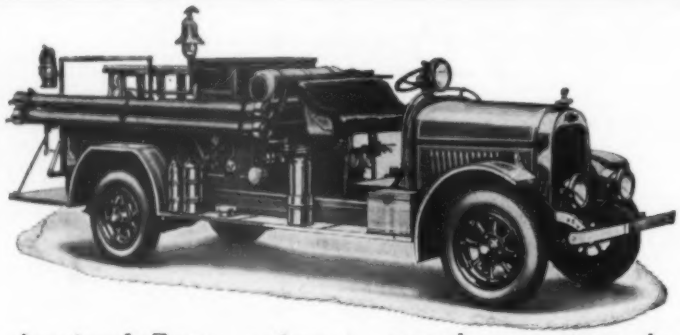
"When fire is discovered, call Central from nearest phone."

The Erick is the only Siren using one big whistle on a powerful 3 and 5 h.p. motor which throws its sound evenly in all directions—louder and more penetratingly than all others. Many special features including special designed hood and screen that protects siren from rain, storm, and nesting birds.

"Central presses button connected to Siren."

Write for full information and details of liberal 30 Day Free Trial Offer

ERICK ELECTRIC SIREN CO., INC.
95 South Wabasha Street
ST. PAUL, MINN.



LaFrance Brockway

Reduces the Fire Hazard of the Medium Sized Community

American-LaFrance equipment mounted on a light, speedy Brockway chassis gives the smaller community metropolitan fire protection.

This fire fighting equipment is designed and built by the world's largest and oldest manufacturer of fire apparatus with a knowledge of what is best and most essential in fire fighting. It is built with the same thoroughness that features the large American-LaFrance Fire Apparatus.

LaFrance Brockway apparatus is furnished in many different models including chemical cars, combination chemical and hose cars and pumpers. Smaller communities interested in modern fire protection will find it to their advantage to write for complete information.

AMERICAN-LAFRANCE FIRE ENGINE COMPANY, INC.

ELMIRA, N. Y.

Branches: New York, Boston, Atlanta, Philadelphia, Baltimore, Denver, Minneapolis, Los Angeles, Pittsburgh, Chicago, Dallas, Canadian Factory: Toronto, Ont., San Francisco, Kansas City, Mo., Portland

The Los Angeles Fire Dept. is 100% B & M equipped.

Hundreds of Cities over the country using our sirens.

We gladly send B & M Sirens to cities on approval without expense.

B and M

SIREN

"It pierces the air"

You Will Eventually Buy B & M's

Fire officials find the powerful B & M fire apparatus Siren to be ideal to meet modern street traffic conditions. Electrically-driven Sirens cannot be operated successfully by storage batteries in hard and continuous service. Hand-rotated Sirens are both exhausting and dangerous to the operator. Therefore, the mechanically-driven B & M Siren with its piercing screech that can be heard for miles is the ideal fire apparatus Siren.

Send for Complete Information

B & M Siren Manufacturing Co.

Lester H. Miles, Proprietor

931 So. Main St. Los Angeles, Calif.

BUCKEYE WHISTLES

Do they hear *You* Coming?

You can MAKE THEM HEAR you by using the same type of signal that is being used by the Locomotive. And why not? For 75 years the great American Railroads have been using WHISTLES to attract attention to an approaching train. If more effective warning signals existed, the railroads would be using them today—for they are spending millions annually to prevent the DESTRUCTION of LIFE and PROPERTY. Our Engineering Department has now made it possible for Fire Apparatus to also enjoy the protection of

BUCKEYE WHISTLES

A Warning Signal that Warns

BUCKEYE IRON & BRASS WORKS ~ DAYTON, OHIO

Recent Patents

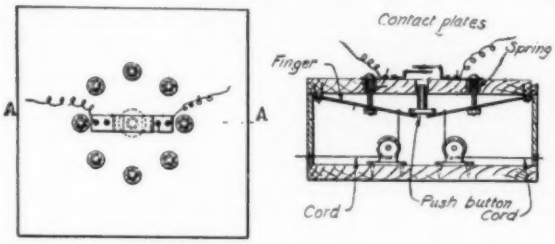
Descriptions of Patents Recently Issued of Interest to Fire Departments—Three Different Fire Alarm Devices

Fire Alarm Signal

A device which will transmit a fire signal and which can conveniently be located in various parts of a building has been patented (No. 1,585,122) by George A. Shaffer of Perryville, Md.

At the left of the illustration is the plan view of the device; on the right is a sectional view taken along the dotted line A-A.

A base is provided having a central aperture in which the push button operates. Just above the aperture and in line with the push button are two contact plates secured to the outer surface of the base by the screws and connected by the wires in circuit, with a bell or other alarm indicator. The free ends of the contact plate are in close proximity with each other and are adapted to be forced together to close the circuit by the



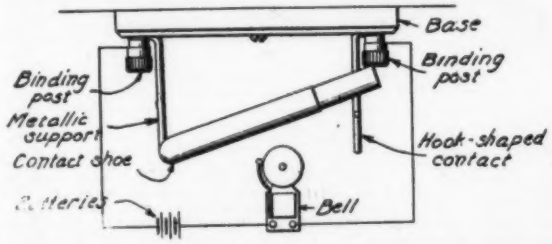
push button when one or more of the alarm fingers are released.

The alarm fingers are pivoted as shown to the inner surface of the base and are arranged radially with respect to the push button, and the free ends are adapted to strike the head of the push button when released. Each finger is provided with a bolt which projects through the base and with a spring between its head and the bottom of the recess in the base. The fingers are enclosed in the case and are provided with a cord secured to its free end which passes over a pulley and out through an aperture to the desired room or part of the building, where it is secured. Any number of fingers may be employed in accordance with the number of the rooms.

The ends of the cords are secured so that the fingers will be held down against the action of the coiled springs and out of contact with the push button. As soon as a fire starts, one of the cords are burned, releasing the finger against the action of the coiled spring. The push button becomes depressed and causes contact—the alarm is turned in. By observing the cords, the room on fire can be located.

Fire Alarm Device

A patent (No. 1,591,856) has been granted to Charles H. Matter of Newport, R. I., for his design of a fire alarm device



for closing a circuit through an alarm in case the temperature of the room reaches a degree in excess of the safe temperature. The illustration shows the device in a side elevation, and the circuit therefor.

A base is provided on which to mount the device, and it is mounted upon the ceiling of the room by means of a screw. Carried by this base is a metallic support held in place by or at least connected with a binding post, and also carried by the base is a hook shaped contact. This contact is held in place by, or electrically connected with, a second binding post.

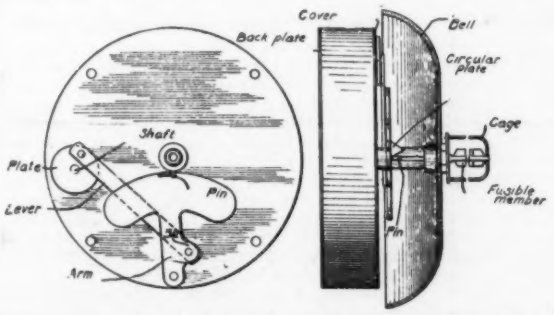
The essential element of this device is an elongated arm which is formed of a suitable length of flexible wire or other conductor soldered or otherwise fastened to the support at one end and having its other end carrying a comparatively heavy metal contact shoe soldered or otherwise secured thereto. The flexible wire is encased in a protective sheath of some composition which will readily soften at a certain desired temperature. The arm is so constructed and the nature of this sheath or covering is such that the arm will extend in an upwardly inclined position and in spaced relation to the hook contact. In actual practice it is intended that the device be mounted on the ceiling and that the binding posts be connected in series with a bell or other arm and a battery. When the temperature reaches a dangerous degree, the sheath or covering on the warm will soften whereupon the extremely flexible wire therein will bend down and permit the contact shoe to engage the contact arm and close the circuit for setting off the alarm.

Fire Clock

A patent (No. 1,524,063) has been granted to Julius Swanberg of Chicago, Ill., for his design of a fire clock. The object of this design is to provide a device that will operate as the result of a fusible element and set off a fire alarm. The entire equipment is self contained.

On the left is a plan view of the design, and at the right is a side elevation partly in section showing the bell gong and the thermostatic device.

The cover of the casing has a cylindrical body and a back plate. Within the case formed by the plates and the cylindrical member is contained a driving device for the apparatus which is similar to an ordinary clock mechanism comprising a spring and



gears. The spring is wound by a key. The plate at the left when being turned by the action of the spring and gears actuates an offset crank one end of which is eccentrically mounted thereon, the other end being in turn mounted for pivotal movement on an extended lug on an arm pivoted to the plate. The end of this arm is made in the form of a double-bell clapper as shown and is constructed in an enlarged T-shape. The ends thereof are adapted to operate as clappers to ring the bell member of gong when the device is set in operation. A triangular shaped member extends upwards and is mounted on the end of the arm that is adapted to coact with an extension which projects outwardly through a slot in a hollow bracket provided on the outer face. The gong member is hollow to contain a coiled spring mounted therein and having an upwardly extending pin which is normally held in a downwardly compressed position by means of the thermostatic member soldered together by a fusible link.

Fire alarm devices such as are used at the present time are usually connected in a fire alarm or protective system to be controlled or operated from a distant point or outside source of energy and are not only complicated and expensive to install and maintain in working condition, but are not independent and readily transferable from place to place so that they will be within the means of average users and capable of being located in any desired place at will. The device described, it is said, will remedy such conditions.

Wheeling, W. Va., Purchases Pumper—The council of Wheeling, W. Va., has purchased a Seagrave triple combination pumper.

COURSE OF INSTRUCTION IN FIRE PROTECTION

As Given at the University of Illinois

SAFEGUARDING THE BUSINESS DISTRICT

THIS twenty-fourth installment of the University of Illinois Course in Fire Prevention includes discussion on the paper on the above subject by Captain J. J. Conway, Superintendent, The Underwriters Salvage Corps, Cincinnati, Ohio, concluded in the last issue of FIRE ENGINEERING:

MR. GAMBER—I want to say that I have known Captain Conway for eight years. Captain Conway performed one of the greatest services for firemen, and especially his home city, Cincinnati, that has ever been performed by any fireman in the world. Years ago Captain Conway started in Cincinnati when the rates of insurance there were something like nine or ten dollars per capita per year. Captain Conway took the matter in hand and today Cincinnati enjoys the lowest fire insurance rate of any city of its size in the world. That's the record he has made. He studies it, he eats it, he sleeps it and he is always working on it. He is always on the job. It is the experience he has had. He has gone through a severe school of experience. Some fifteen years ago, in the Presto-Light fire in Cincinnati, Captain Conway was blown, I don't know how many feet, through the brick wall and lay at the point of death for about nine months. After he got on his feet he studied it over and began to wonder how it happened and why it happened. He has taken up this work throughout the United States. He knows how. He gets it over and if some of the rest of us would attempt to go out and say some of the things Captain Conway does, the fellows on the National Board would jump all over us and walk on us, but Captain Conway gets by with it and says the things that ought to be said and brings them home to the National Board fellows and makes them like it. I have asked Captain Conway time and again to tell me how he does it. He says, go to it, tell them the truth and they will like it.

MR. CONWAY—While you are thinking of the questions, I would like to tell you a story brought to my mind by that after-introduction. There was an Irishman living in Middletown, Ohio, who did not have any education. I don't know what we would have done with him if he had an education. He broke up every meeting we ever had. He belonged to some building organization or an organization of a bank there. They broke up. He had some of his money in it and as time rolled on the president of the bank called the creditors together and explained how the disaster came about, told them he felt so badly about the thing that if it were possible to cut up his body and divide it among those that lost money, he would be perfectly willing to do so. The Irishman said, if you do, give me your gall.

It might be interesting to know why in fire prevention work the clean-up and paint-up was put in. If I had spoken alone on fire prevention I could not have brought up the interest. I included sodding and beautifying the lawns and explained to the people the reason why the painting was conservation; how it protected the wood and wire and other things from deteriorating by rust and by dwelling on the whole thing by and by I got a fellow in a square to plant some flowers. His neighbor got jealous and did a little better, so that's the reason we added that slogan, clean-up and paint-up. The whole truth of the matter goes away back to the introduction of the tooth brush and the white collar, which brought the American people up more than anything else. That was a clean-up movement when that was done.

A MEMBER—Captain Conway turned every dump and waste spot in Cincinnati into a beauty spot. He took places here and there, dumps, and turned them into flower gardens.

MR. HAWK—I would like to ask the captain a question, in regard to the difference in fire losses in Europe and this country. You say they hold a man responsible for a fire in his property in the old country. We don't do it here. Now, captain, would you suggest that we start in with our city officials or state legislature and state senators to get a remedy for this? We must have a remedy.

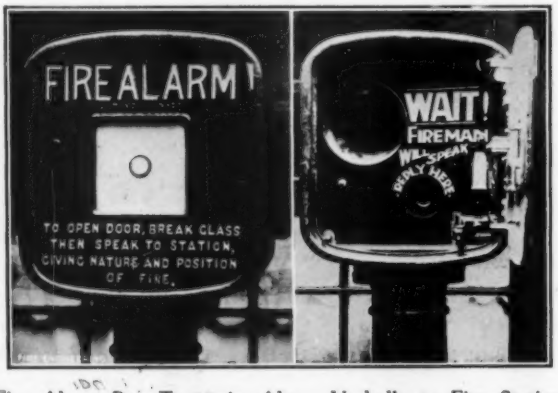
MR. CONWAY—We have already got a law in Cincinnati if we would attempt to enforce it, but we have allowed that law to become a dead letter by remaining silent. We ought to put the burden of proof on the man who has the fire as to the origin of the fire and to prove he was not responsible.

We have a law in Cincinnati that will permit us to tax the man who has a fire, if the fire is caused from any reason or from any cause that we have asked him or served notice on him to eliminate, and we have now pending a case where we charged a man on Main Street $600 for extinguishing a fire. Those things are helpful and if they know they have to pay for the extinguishment, where the fire is brought about by their own carelessness, in addition to the taxes they are already paying, that is a good help.

You let some fellow with no insurance get his building burned by the carelessness of his neighbor and see how quickly he will sue his neighbor and take damages. That's on the statute books today, but we have not enforced it, and we have gone on condoling with such a man the same as we are condoling with the fellow running over people with his automobile in the streets today.

I was talking with a Pennsylvania safety man who told me of a case where a railroad parallels the road for three-quarters of a mile. There was an automobile running along here and the train there, about three-quarters of a mile away the train crossed the road. There were 63 cars in that train and that d——— fool ran into the 48th car. He said, "I thought the train would get by before I got there." And we still allow that man to drive an automobile.

The question you put, my friend, is very proper. What you want to do is to create a sentiment for the thing. Show the people it is their pockets that are being picked, it is their expense that is being run up, and in that way you will arouse public sentiment; and with public sentiment once thoroughly aroused on any subject the end is accomplished. A law that is not popular with the people cannot be enforced. It is the same with everything else. We have a mission. Our mission is to educate the public and change their attitude of mind. Take those they have been condoling with and hold them up before the bar of public opinion, so they must show they are in no way responsible for the fire, and the whole thing will change; just like the clean-up, when two men cleaned up they all cleaned up.



Fire Alarm Box Transmits Alarm Verbally to Fire Station

A new type of fire alarm box has been installed in Birmingham, England, that enables the individual to speak with the firestation attendant and to transmit the alarm verbally. At the left is the new box when closed. To transmit the alarm it is necessary to break the glass and the door immediately flies open. The person then speaks into the mouthpiece and the voice is amplified through an amplifier at the station. The fireman can converse with the one turning in the alarm. The fireman's voice is amplified so that it can be heard twelve to fourteen feet away above the roar of the street traffic. It is impossible for any one to send in a false alarm in a busy district without people in the vicinity becoming attracted to the incident by the roar of the fireman's voice as it is amplified through the lower horn in the new fire alarm box. Much valuable time will be saved as it is possible to tell just what equipment to send out in answer to the alarm.

Many Improvements Planned for Topeka, Kans.—The council of Topeka, Kans., has voted $200,000 for improvements in the fire department that will include the construction of a new headquarters building, with a drill tower, the re-building of two other stations, and the erection of a new station in the southwestern part of the city. Work will be started on these improvements at once.

Q. What is ANALOX?

A. A Paint.

Q. How does it differ from other paints?

A. It is more durable. It costs less. It is more economical to apply. It dries more quickly.

Q. Is it anything more than a paint?

A. Yes. It is a fire retardant.

Q. What is the "ANALOX PROCESS"?

A. A process for protecting wood shingle roofs against fire brands.

Q. How effective is it?

A. Tested by the Engineering Laboratory of Columbia University the roof treated with the "ANALOX PROCESS" withstood successfully the famous "burning brand test" which is used by the Laboratory of the National Board of Fire Underwriters.

Q. What is the bearing of this on fire hazards in American Cities?

A. Wood shingle roofs impose a terrifying "conflagration hazard" on practically all our large cities. The existing risk from wood shingles can be done away with at relatively small cost by the "ANALOX PROCESS".

Q. How should the matter be handled in your city?

A. A local contracting company should be formed to apply the "ANALOX PROCESS" under license from us. This process should be made compulsory for all wood shingle roofs in congested districts.

For particulars write to:

THE ANALOX PAINT and COLOR CORP.

83 Chambers Street **New York City**

WHY SIRACODE IS THE SEARCHLIGHT OF SOUND!

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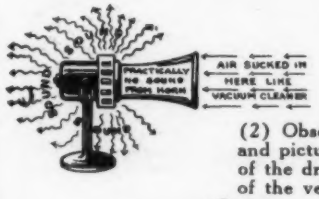

A Siren is Pictured Here

(1) Note that the so called "Horn" merely serves as an intake for air, emitting practically no sound! For this reason many manufacturers omit it completely on certain models. As a matter of fact it is more of a detriment than an asset.

(2) Observe how the sound is ejected through a number of port holes in all directions, and picture, if you can, what a large percentage of it is forced backward into the ears of the driver, and over the road already travelled, this increasing greatly with the speed of the vehicle! Do you wonder why they don't clear the way ahead?

Now Study The Construction of a Siracode

(1) Note that the rotor and stator are **Parabolic**, causing the sound waves to be **forcefully projected forward in the line of travel** where they are **wanted and needed.**

(2) Observe the scientifically shaped, and correctly proportioned deflector, which also **greatly intensifies the sound.**

(3) The specially constructed motors used for **SIRACODE** consume about **one third** the amperage of a siren of similar volume, **in short.**

SIREN

LAMP POST

SIRACODE

SEARCHLIGHT

So Why Put a Lamp Post on Your Car?

SIRACODE SIGNAL CORPORATION

Formerly Heath Engineering Laboratories, 354 Pine St., San Francisco, Calif.

Originators of the Aluminum Box

The Harrington-Seaberg Corp. was the first to make cast aluminum fire alarm signal boxes now conceded everywhere to be the best.

FIRE ALARM BOXES

Adequate fire protection demands reliable fire alarm signal equipment. Harrington-Seaberg sixteen round, succession, non-interfering type boxes can be depended upon to operate perfectly **every time.** Made by specialists in the design and manufacture of fire alarm signal equipment. Boxes are cast aluminum, eliminating all possibility of rust or corrosion.

Don't fail to investigate our complete line of fire alarm and police signal equipment before you buy; literature mailed promptly upon request.

HARRINGTON-SEABERG CORP.
Moline Dept. G Illinois.

BADGES

of Every Description

QUALITY GUARANTEED

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Prompt Deliveries

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Our latest catalogue and price list will gladly be sent on request.

EVERSON-ROSS CO., INC.
88 Chambers St., New York

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PROTECTION A.D.T. SERVICES

The remarkably efficient A. D. T. System of Central Station Night Watch and Fire Alarm Service has played a large part in helping to cut down the fire loss of the country; and the A. D. T. System of Sprinkler Supervisory Service has been instrumental in saving millions of dollars in water damage.

An Invaluable Service

It is generally known that water damage in sprinklered premises is considerably greater than fire damage, and it is a fact that in a great majority of sprinklered equipments no one on the premises knows how to shut off the water. Hence, the great importance and value of our Supervisory Service in not only recording water flows, but immediately sending representatives who know how to stop them.

Over $20,000,000,000

worth of property throughout the country is protected by A. D. T. services, and fire officials in cities everywhere are finding A. D. T. cooperation an invaluable aid in their work.

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Controlled Companies

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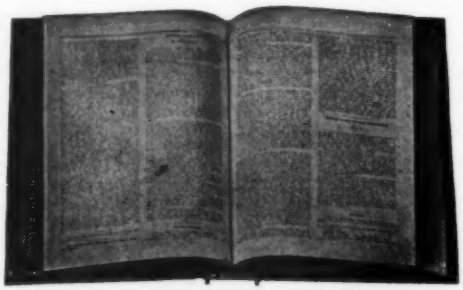
Executive Offices, 183 Varick St.
New York City



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Ex-Chief Hogg of Binghamton, Dead

Charles N. Hogg, who was formerly chief of the Fire Department of Binghamton, N. Y., and who was a member of the International Association of Fire Chiefs for twenty-five years, died as the result of heart disease on December 4 in his garage.

Mr. Hogg had returned from a Christmas shopping trip at the Binghamton stores with his wife and he had just placed his car in the garage when he dropped dead. He was retired several years ago. Besides his wife, he is survived by a brother and two sisters. In addition to the I. A. F. C., he was a member of the state firemen's organization.

The Late Ex-Chief Charles N. Hogg
(Photo taken while Chief)

Fire Prevention Week Effective

In order to ascertain the effect of the observance of fire prevention week, a question blank was sent out to the various chiefs by the National Board of Fire Underwriters. The result from 279 cities with a population of 20,000 or upwards indicated that eighty municipalities, or 28 per cent, suffered no fire loss whatsoever and that during the following week, eighty-seven escaped loss by burning.

The information obtained in this survey indicated that as the results of the educational campaigns waged by the chiefs, civic organizations and others, the fire losses were checked.

Kenlon Coal Co. Damaged by Fire

A two alarm fire destroyed a considerable quantity of coal in the pockets of the Kenlon Coal Co. at 96th street and the East River, New York, early in the morning of December 2. The Kenlon Coal Co. is composed of Walter, Gerald and Edward Kenlon, sons respectively of Fire Chief John Kenlon. The blaze was extinguished mainly by two fireboats.

Chimnee-Sweep Company Expanding

F. E. Buckman, President of the Chimnee-Sweep Manufacturing Company of San Francisco, Cal., has been in New York the past month laying out plans for a very greatly extended business. Hereafter all sales will be made direct from the New York office, at 530 W. 58th street.

Mr. Buckman announces that offices have been opened in Chicago and Denver to take care of future business in those territories.

The Chimnee-Sweep has been enjoying rapidly growing sales throughout the country, both on the part of fire departments and property holders.

Knoxville Firemen Get Increase

A sum of $36,000 has been set aside for increases in the annual pay of the members of the Knoxville, Tenn., fire department. The raises will be based on the merit system plan, and will not be arranged on a flat basis as formerly. The details of the new plan are yet to be worked out.

The new system will not be effective before January 1. Under this plan there are four schedules marked A, B, C, and D, dependent upon the number of years that a man is in the service. A fireman may be rewarded by being advanced from one classification to that of another, without waiting for the required period of time to pass.

When the matter of pay increase was argued before the council, Chief Sam Boyd wrote a letter to the city manager in which he argued for a pay increase for his men. He said, "If you don't raise my salary, it is all right with me."

Can Not Garnishee Firemen's Pay

That a city fireman's salary was not subject to garnishment was a ruling sustained in the city court of New Orleans recently on the grounds that a city functionary is not subject to such procedure.

The question came up when a New Orleans fireman, one of three men who indorsed a note for $250, were called upon by the holding company to make good the note that the original party defaulted in paying. A judgment was obtained against the fireman and two payments of his pay was withheld. The matter was taken to the courts and the fireman proved the victor, in that an attachment could not be placed on his salary.

Fat N. Y. Fireman Ordered to Retire

The Supreme Court of New York County has denied the petition of retired fireman Henry Qualmann for a writ of mandamus requiring Fire Commissioner John J. Dorman to reinstate him in the New York Fire Department. Justice Francis B. Delehanty, in an opinion handed down on December 1st, decided that Qualmann's forced retirement on July 1, 1926, on the recommendation of the Board of Medical Officers was legal and warranted by the facts, to wit: that Qualmann was a victim of obesity, defective vision and elephantiasis of the lower extremities and that his condition was not caused nor induced by actual service or duty as claimed by Qualmann in his petition to the Court.

Fireman Qualmann, in October, 1924, was the driver assigned to the car of Battalion Chief Thomas F. Norton. En route to a fire, a Brooklyn trolley car collided with the Chief's motor and injured both the Chief and his driver to such an extent that neither of them has returned to active duty since. In the Brooklyn Supreme Court recently a jury awarded Chief Norton $20,000 damages and Qualmann $5,000 damages.

Qualmann in June last was ordered before the Medical Board to determine his fitness to continue any longer in the service.

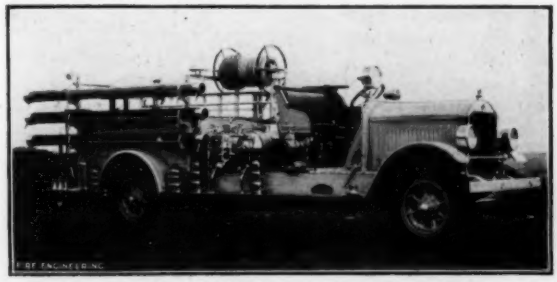
He was examined and found to weigh 248 pounds. His sight was not all that it should be in the fire fighting business and he had a swelling of the thighs and the legs which hampered his locomotion. He claimed that his condition was the result of the accident and if that be true, he could not be forced out of the service while able to do any sort of light duty. This contention is an old one and has been firmly established in law in previous cases.

The Medical Board, however, determined that Qualmann's condition was not the result of the accident His own physicians disagreed with that contention. The Fire Commissioner retired him on half pay, or $1,250 a year for the rest of his life time. Qualmann went to the Supreme Court for relief. Justice Delehanty decided that the only relief he was entitled to was the pension of half pay.

Chief Medical Officer Joseph F. Smith was asked what he considered to be obesity. He said that a fireman was obese when his belt measurement was greater than his chest expansion.

Qualmann had been a fireman since January 20, 1896. His name appeals twice on the roll of merit.

W. J. DALY.



Sanford Pumper Delivered to Staatsburg, N. Y.

A 500-gallon Sanford triple combination pumper has recently been delivered to Staatsburg, N. Y. It has passed the necessary Underwriters' tests and it has been placed in service.

PROPOSED IMPROVEMENTS

Mt. Airy, Carroll Co., Md.—Fire department being organized here.

Raymond, Kandiyohi Co., Minn.—Village considering the purchase of truck equipped with two 40 gallon chemical tanks or one 60 gallon tank, for the fire department. G. W. Swenson, City Clerk.

Ashland, Camden Co., N. J.—The Ashland Fire Company is raising funds for the purchase of additional equipment for the company. James R. Ullrich, Chairman of the Committee in charge.

Dunellen, Middlesex Co., N. J.—Plans are being made for the installation of a fire alarm system here.

Albuquerque, Bernalillo Co., N. Mex.—Plans are being made for the installation of new fire alarm boxes in this city.

Binghamton, Broome Co., N. Y.—Residents of Twin Orchards, on the Binghamton-Vestal highway have organized a fire company with George Newton as chief.

Black River, Jefferson Co., N. Y.—The village voted in favor of purchasing a combination chemical and hose car.

Manayunk (Sta. Philadelphia) Penn.—A fire station is soon to be erected at Green Lane and Main Street at cost of $100,000.

East Providence, Providence Co., R. I.—Funds to be raised by the Bay View Hose Co. of Armington's Corners, for the purchase of new motor apparatus and the erection of a fire station.

Hidalgo, Hidalgo Co., Tex.—New fire station to be erected at Hidalgo Park.

Waco, McLernan Co., Tex.—Plans being made for purchase of new fire apparatus to replace the one now in use. E. E. McAdams, City Manager.

Garfield, Bergen Co., N. J.—Ordinance has been approved by the City Council providing for the issuance of $2,000 in bonds for the fire department.

Orange, Essex Co., N. J.—Wm. F. Kearney, Director of Public Safety recommends the purchase of an aerial truck for the fire department.

Santa Monica City, Los Angeles Co., Calif.—City Commissioner studying bond issue for the purchase of more fire equipment. Pacific Board of Fire Underwriters say the fire equipment should be doubled.

Santa Barbara, Santa Barbara Co., Calif.—Plans are being made by City for a $20,000 bond issue for erection of fire station and purchase of equipment for fire department.

Pomona, Los Angeles Co., Calif.—J. M. Evans of the Board of Pacific Fire Underwriters stressed the need of fire alarm system for the city.

Portland, Multonoman Co., Ore.—The first $300,000 of the $735,000 bond issue authorized Nov. 2 for the expansion of the fire bureau will be used next April 1 and the next block of $300,000 will be issued on August 1, according to the City Council.

Des Moines, Polk Co., Iowa—City Council ordered that a new aerial ladder truck be purchased at once for the fire department to replace the one in use now.

Topeka, Shawnee Co., Kan.—City voted in favor of a $200,000 bond issue for the improvement of buildings for the fire department. This will include a new headquarters building with a drill tower, the rebuilding of two other stations, and the building of a new station in the southwestern part of the city. Joseph Waldelich, Fire Marshal.

Englewood, Bergen Co., N. J.—Ordinance to provide for the construction of a new fire station was adopted by the Council.

New Orleans, Orleans Co., La.—In his report on the fire department, Commissioner Habans urged a budget appropriation for 1927 of approximately $100,000 for the rehabilitation of fire department equipment declared by the commissioner to be vitally essential and $101,000 to the purchase of new fire station sites; and $98,500 for the purchase of new equipment which would be required for these new stations.

Downsville, Delaware Co., N. Y.—At recent election city voted against the proposition to appropriate $8,000 for the purchase of apparatus for the fire department.

Industrial (Mail Los Angeles), Los Angeles Co., Calif.—City Council adopted ordinance No. 62 calling for election on a $20,000 bond issue part of which will be used for the purchase of fire equipment.

Proposals for Fire Apparatus

MISHAWAKA, IND.

Bids Opened December 20, 1926

The City of Mishawaka, Indiana, will receive bids until 11 o'clock a. m. December 20th, 1926, for a Double Bank Combination City Service Hook and Ladder Truck. A certified check for $250.00 and a none collision affidavit must be included with said Bids. The right is reserved to reject any and all bids. Specifications on file in the City Clerk's Office.

Signed:—

City of Mishawaka,
By Board of Public Safety,
Ralph S. Feig, President,
L. B. Gamble, Clerk.

12-10.

FOR SALE
Fire Apparatus

One Seagrave, 4 Wheel Tractor, City Service Hook and Ladder Truck, equipped with 1 50 ft. Extension Ladder and other portable Ladders, including miscellaneous equipment. Address: Box 129, % FIRE ENGINEERING, 225 W. 34th St., N. Y. C.

11-25, 10, 25.

For Sale
Fire Apparatus

One Brockaway Motor Truck and one G. M. C. Motor Truck. These trucks have been in use by the Fire Dept. of the Village of Rockville Centre, and are now offered for sale to the highest bidder, having been replaced by more modern apparatus. Bids should be addressed to the Board of Trustees, Village of Rockville Centre, and delivered to the Village Office on or before the next meeting of the Board to be held on December 15, 1926.

For further information get in touch with Mr. O. F. Conger, Chief of the Fire Dept., Rockville Centre, N. Y.

12-10, 25, 1-12.

CONVENTION DATES

Jan. 11-13, 1927—ILLINOIS FIREMEN'S ASSOCIATION. 39th Annual Convention, Quincy, Ill. Secretary, Roy W. Alsip, Champaign, Ill.

Jan. 18-20, 1927—NEBRASKA STATE VOLUNTEER FIREMEN'S ASSOCIATION, 45th Annual Convention, Columbus, Neb. Secretary, H. A. Webbert, Kearney.

Jan. 29, 1927—BERKS COUNTY FIREMEN'S ASSOCIATION. Meeting at Reading, Pa., with annual banquet.

Aug. 14-16, 1927—NEW YORK STATE PERMANENT FIREMEN'S ASSOCIATION. Annual convention, Elmira, N. Y. Frank A. Emden, secretary-treasurer, 1200 Lenox Ave., Utica, N. Y.

Sept. 1927—KANSAS STATE FIRE CHIEF'S AND FIREMEN'S ASSOCIATIONS. 11th and 40th Annual Conventions, Kansas City, Kan. Secretary, Chief K. D. Doyle, Wamego, Kan.

Sept. 7-8, 1927—MISSOURI STATE FIRE CHIEFS' ASSOCIATION. 5th Annual Convention, Kirksville, Mo. Secretary, District Chief J. T. Lynch, Kansas City, Mo.

Sept. 7-8, 1927—MISSOURI ASSOCIATION OF FIRE FIGHTERS. 2d Annual Convention, Kirksville, Mo. Secretary, M. J. Mulvoy, 3500 S. Grand Boulevard, St. Louis, Mo.

Paterson, N. J., Has Department Parade

The parade and review of the fire department of Paterson, N. J., the first time since the one held in 1914, was held recently.

The firemen's division was headed by Battalion Chief John A. Specht. Chief Thomas L. Coyle was ill at his home from bronchitis which he contracted while attending the convention of the International Association of Fire Chiefs at New Orleans.

With the exception of one piece of apparatus that was kept in reserve, all the equipment of the department was in line and showed the development of fire apparatus from the old type gooseneck pumper. The apparatus on exhibition included thirty-four pieces. There was a forty-piece band to furnish music, and the policemen's division of the parade was headed by their own band.

Zoning Upheld by Supreme Court

The zoning law as applied in the familiar way of zoning by use, height and area, was upheld by the Supreme Court in the matter of Euclid, a suburb of Cleveland, Ohio.

The ordinance there set up six districts—farms, homes and parks in the first, apartment houses, hotels and churches in the third, warehouses and markets in the fifth and so on. The Ambler Realty Company had sixty-eight acres of land in the village that fell in three different districts. The company maintained that its property was worth $10,000 an acre if used for business property but only $2,500 otherwise. The company's case was argued by Newton D. Baker.

The court stated zoning was a logical development of police power under modern conditions of urban life. This decision is of material importance to New York state that has been a pioneer of this movement. In the past ten years, five hundred municipalities have followed the lead of New York; the courts have upheld the validity of the law with the exception of New Jersey and Georgia.

Firemen Hurt in Test of Old Steamer

Two firemen of Columbia, S. C., were injured during the test of an old steamer, and one of the men is not expected to live.

It is the custom of the fire department to take this steamer out once a month for a test. While the engine was being tested and several men were holding the discharge nozzle, one of the observers shouted for more pressure so that he could reach a certain object with the fire stream. At that time there was an engine pressure of 130 pounds, and the one who was maintaining steam said that the only way that the pressure could be increased was to replace the nozzle with one of smaller diameter.

This was done. Without any warning whatsoever, the hose parted from its coupling near the nozzle and threw the two firemen over, who were directing the stream. The solid stream then played on their backs until the operator could shut down the flow of water. One of the men upon being removed to the hospital was found to be suffering from a bad scalp wound and several minor cuts; the other sustained a broken collar bone and possible internal injuries. Pneumonia set in and there is little hope for his recovery.

This is the first accident of this nature in the history of the Columbia, S. C., fire department.

Branam Chief of Van Wert, O.—Harvey Branam has been promoted from assistant chief to chief of the fire department at Van Wert, Ohio. He is thirty-two years old and has been a fireman six years.

C. A. M.

The Greatest of All Fire Apparatus Sirens

Unconditionally Guaranteed

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Chief James C. Mooney of the City of Watertown, South Dakota Fire Dept. writes:

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Much Better Than We Expected is the verdict of those using the

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Smoke and Fume Respirator
Send For Descriptive Catalogue

No Sponge. Price $5. With Airtight Goggles $5.60

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"Four years ago you sold my Commissioners one thousand feet of Bi-Lateral Fire Hose against my will. For the past twenty years I have always stuck to the stiff multiple hose, being afraid if I got away from that my Commissioner would buy me cheap hose. Since using your Bi-Lateral hose and watching my men work with it I frankly say that I never knew what good hose was before. Enclosed you will find a Purchasing Order No. 728 covering another thousand feet. Couple this with the rocker lug coupling and send us twelve combination spanners, No. 45."

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of every description, stronger than lead and none-corrosive. Used by departments throughout the country.

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Agents in Principal Cities

Send for our Complete Catalog

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INCORPORATED
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Nozzles and Deluge Sets
Are Designed by Engineers

who, for over thirty years, have specialized in equipment for producing superior fire-fighting streams in all sizes unsurpassed for solidity, distance and effectiveness, and safely handled under all pressures.

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Siren with Storm Head

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Conshohocken, Pa.

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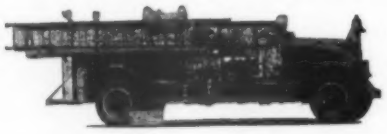

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PRODUCT OF GENERAL MOTORS

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The "Corey" Fire Hydrant of the improved Rensselaer type is the easiest to operate of any on the market.

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RENSSELAER VALVE CO., Troy, N. Y.
Send me Hydrant Book, No. 9.

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Street ..... City .....

EDDY
Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience go into their manufacture and they embody valuable and exclusive features.

Write for the Facts

EDDY VALVE CO.
Waterford, N. Y.
James B. Clow & Sons, Chicago Agents

FIRE DEPARTMENT ACTIVITIES

Planning for Delphos, Ohio Meeting—Plans are being made for the meeting of the Northwestern Ohio Volunteer Firemen's Association that will be held in Delphos, Ohio, in June.

Everett, Wash., Chief to Have New Car—A new automobile is to be purchased for the use of Chief C. E. Swanson of Everett, Wash.

Gardiner, N. Y., to Purchase Apparatus—A fund of $7,500 has been appropriated in Gardiner, N. Y., for the purchase of a pumper.

Brookfield, Mass., to Purchase Pumper—Brookfield, Mass., will purchase a Larabee pumper to replace the one that was destroyed when their fire station burned.

New Chief Appointed in Auburn, Me.—V. E. Cargion has been appointed chief of the fire department at Auburn, Me., to succeed Chief Chester H. Blethen who retired.

Point Place, Ohio, Erects Own Fire Station—The members of the fire department at Point Place, Ohio, are erecting their own fire station. The only thing purchased will be the material, as labor of the men has been donated.

Fire Headquarters to be Built in Hightstown, N. J.—A two-story fire headquarters building will be erected in Hightstown, N. J., at an estimated cost of $40,000. Plans are being drawn for the new building.

Static Electricity Caused Gasoline Fire—While a motorist of North Bergen, N. J., was pouring a gallon of gasoline into his car, the static electricity developed started a gasoline fire that slightly burned the motorist and called out the fire department.

New Fire Station for Quincy, Mass.—A contract has been awarded for the construction of a new fire station in the Atlantic district of Quincy, Mass., to accommodate three pieces of fire apparatus.

Several Die in Hungarian Factory Fire—Fire in a factory at Kerekeghaza, Hungary, caused the death of three men and three women. A panic ensued and many jumped from the windows before ladders could be raised.

Chief Irving H. Fay of Marlboro, Mass., Dead—Chief Irving H. Fay of Marlboro, Mass., died at his home on 92 Newton Street. The funeral services were held on Saturday, November 13.

Assistant Chief of Dallas, Tex., Dead—J. M. Templeton, assistant chief of Dallas, Tex., died in a local hospital at the age of sixty-five. He is survived by a widow, one son, three brothers, and two sisters.

Nebraska Unveils Volunteer Firemen Tablet—A tablet has been unveiled in Scottsbluff, Neb., to the memory of the volunteer firemen. It is said that this is the first firemen's monument in the state of Nebraska.

Eleven-Year Boy Turns Fire Bug—His desire to see the fire engines prompted an eleven-year old New York city boy to build a fire in an empty apartment. He was held by the Children's Society.

Pasadena, Cal., Firemen Voted Pay Increases—The firemen of Pasadena, Cal., will receive an increase in their monthly salary. Each man will receive approximately an increase of $20 a month.

Comm. Dorman Dedicates Queens Fire Station—John J. Dorman, fire commissioner of New York City, dedicated the new fire station for Engine Company 308 and Hook and Ladder 155 in Richmond Hills, Queens Borough, New York City.

Chief Francis to be Recommended for Medal—Chief Harry Francis, of Bradley Beach, N. J., will be recommended for a Carnegie hero medal for rescuing a man from the path of an oncoming locomotive. The chief received slight injury to his arm.

Kenmore, Ohio, Improves Fire Alarm System—A number of improvements have been added to the fire alarm system of Kenmore, Ohio, in order to serve the growing industrial and residential section. A new Garl punch type register and twelve new Garl fire alarm boxes have been installed.

Kemmerer, Wyo., May Pay Men—The mayor of Kemmerer, Wyo., is in favor of the plan of paying the men who are now members of the volunteer fire department. The town has grown so that the services of the firemen can no longer be expected as gratis.

Firebug Roasts Ducks with Gasoline—A fiendish firebug broke into a coop of a poultry market and after pouring gasoline over the backs of the ducks, he set the poultry on fire. By the time the firemen arrived most of the poultry were burnt to a crisp and others had to be killed to end their pains.

Schenectady, N. Y., Wants New Pumpers—Chief August G. Derra of Schenectady, N. Y., has requested, in his 1927 budget, that the city purchase two triple combination pumpers and one city service truck to be attached to a tractor now owned by the city.

Cleveland, Tenn., Chief Re-Elected—W. O. Horner who has served as chief of the fire department of Cleveland, Tenn., for the past thirty years, with the exception of 1914 and 1915, has been re-elected to the office. In addition he is superintendent of the fire alarm system.

Steam Extinguishes Texas Oil Fire—An oil fire in Beaumont, Tex., that resulted in a $100,000 damage, was finally extinguished by playing live steam on the fire from a four-inch main. The blaze was caused by the friction resulting from lowering tubing into the casing of the well.

Women Responsible for New Hampshire Forest Fires—M. L. Bartlett, New Hampshire state fish and game commissioner attributes the cause of many of the forest fires to women smokers who carelessly toss the butts of their cigarettes into dry grass near the roadside.

Smith Students Give Up Smoking as Fire Hazard—The students of Smith College at Northampton, Mass., voted to give up smoking in the college dormitories until after the Christmas holidays, in an effort to reduce the fire hazard from this practice. After Christmas a new plan will be tried so that smoking rooms will be provided.

Memphis Names Pumper for Late Chief—The pumper belonging to Company No. 4 of Memphis, Tenn., has one brass plate on each side bearing the name of M. J. Fitzmorris, the late fire chief. The men believe that there could be no better monument to his memory as he was a member of this company when he first joined the department.

New York City Tests Old Fire Hose—All the company commanders in New York City recently tested all the 2½ and 3-inch hose in their possession that was issued prior to January 1, 1923. The hose was tested at two hundred pounds pressure, and all defective hose was marked with the pressure at which it ruptured. Six days were set aside for this work.

Milwaukee Chief Tells of Growth—Chief Peter Steinkellner of Milwaukee, Wis., in addressing the Civitan Club, said that next year he hoped that the department would have three new engine companies, two new trucks and more rescue squads. At the present time the city has thirty engine companies, three fire tugs, thirteen trucks and one rescue squad.

Cleveland, to Improve Fire Department—Following the suggestions made by the National Board of Fire Underwriters in their report of that city, the city has voted to issue $400,000 bonds for various improvements—$65,000 for a new fire department machine shop, $60,000 for a new fire station, $110,000 for nine hundred new fire alarm boxes and $165,000 for other fire alarm system improvements.

Berkely, Cal., Has Grass Patrol—The Contra Costa Hills Fire Protection Committee, an organization supported by voluntary contributions has maintained a fire lookout service from a steel tower on the summit of Grizzly Peak since 1924. This is part of the defense of Berkely, Cal. The tower is equipped with a telephone, electric siren and searchlight. A road along the ridge has been constructed to form a partial firebreak.

Fined for Interferring with Firemen—The volunteer firemen of North Bergen, N. J., while on their way to a fire, were blocked by a bus driver who claimed that he did not hear the approach of the apparatus. One of the passengers on the bus argued with the firemen that they should take the name of the driver and let the bus proceed, but the argument resulted in the arrest of the passenger. He was fined ten dollars.

Chief Myers to Receive Large Pay Check—Chief Tom Myers of Dallas, Tex., now believes that there is a Santa Claus. According to a ruling of the city attorney, the chief will receive a large check to cover back pay. Under the present plan $2.50 a month increase is paid to the members of the department who have a record of five years unbroken service. Chief Myers has been in the department forty-six years and has been chief for more than fifteen years and he has not collected nor asked for the extra pay. The chief will receive a check for $900.

FALSE ALARMS

SEND IT IN

If you have a bit of news,
Send it in; send it in;
Or a joke that will amuse,
Send it in.
A story that is true,
An incident that's new;
We want to hear from you—
Send it in!

DEFINING A TERM

Editor, False Alarms: Can you explain to me the meaning of the fire department term, "Male Butt?"

A CONSTANT READER.

Answer: The illustration should make the meaning much clearer. The fireman

who has lost contact with the earth has just received a "male butt."

"THE FIRE BRIGADE"

Cling, clang, blickerty blang,
Here comes the firemen brave;
Klut, klut, spitity sput
The motors roar and rave;
Ding, dong, the frantic gong
Of hook and ladder brigade,
The siren's screech, the frenzied speech—
The fire alarm is on.

The whistles blow from factories near
And great bells toll the zone,
All traffic ceases, as firemen reach
The path of death, who knows?
The great trucks, wheels now right,
Now left, with ladder swinging wide
So short the turn, yet quick and deft—
What precision—what a ride!

The scene of fire is reached at last,
Police are there in force;
Back, back, the crowd are cast,
All cleared the hellish course;
The Fire Chief's there, the signals given,
Quick, quick, there lads, this way;
Attached the hose, the ladders driven
Against the burning fray.

Up up, each ladder rung
With agility of cats,
Tho' handicapped with boots
And coats and overwhelming hats—
The battle cry increasing loud,
The tumult of the crowd,
The waters swish, the flames a hiss,
The axes split and pound.

O what a din! there's hell within
Those fastly crumbling walls;
Great tongues of flame fight back with vim
The stoutest heart to thrall.
Good God! What's that?—a woman's cry!
Shrill pierce the deafening noise;
There, there, she is—She's gone, O, My!
What terror in that voice.

Look look, there boys, the rescue's on—
There's one, there's two within—
Through sheets of flame they've passed beyond,
Grim death they fight to win.
They've won my lads, three cheers hooray!
To earth they're safely borne;
When shall their glory pass away.
The Gates of Hell they scorn.

WILLIAM S. SWANKER.
Schenectady N. Y

DANCING EXPLAINED

"Hello Jake," yelled one of the volunteer firemen as he met another in the post office. "Why don't you come down to the weekly dances at the fire hall?"

"Ho-ho! Dances!" said Jake. "I couldn't never learn to dance."

"You could to. It's dead easy," replied the other volunteer. "All you got to do is keep turnin' round and wipin' yer feet."

A POSSIBILITY

If this craze for fire department bands keeps up, there is a chance that one may see an advertisement of the following type in the newspapers:

"Wanted: Two good nozzle men to play hose at fire, and mandolin and ukelele in the engine house orchestra."

TOO MUCH WORK

"Well Elmer, how did you make out in the examination for fireman, last week?"

"Ah refused. The first question asked was how far was it from the earth to the moon, so ah told them that ah didn't want the firemen's job that had to answer such long runs."

To our way of thinking there is nothing more terrorizing than a decorator with a calcimine brush unless it be a fireman with a pike pole.

LOOK! LOOK! THE SCHOOL HOUSE IS ON FIRE!
NAW. I BEEN A-WATCHIN' IT FOR FIVE MINUTES. IT'S ONLY THE REFLECTION OF THE SUNSET IN THE WINDOWS
PLEASANT REFLECTIONS..
DV116

—New York Telegram

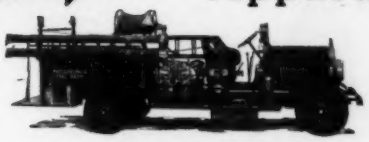
When Fighting Fire

Across Railroad Tracks
Protect Your Hose Lines and Apparatus
with our
Fire Department Emergency Railroad Train Stops
Burn Red for Twenty Minutes

12 train stop lights for $5.00. In neat box for apparatus.

CENTRAL RAILWAY SIGNAL COMPANY
NEEDHAM HEIGHTS, MASS.

Sanford Fire Apparatus



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Better Rubber. Longer Life. Better Fitted. Moulded to Fit the Face. Better Vision. Renewable Lenses. Better Air. Better Work. Low Prices. High Quality.

Over 5,000 Victor Gas Masks in Service

Full Line Fire Dept. Supplies and Equipment.

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35 Warren St., New York

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FIRE APPARATUS

All Types — All Sizes

Send for Complete Information

MAXIM MOTOR COMPANY, Middleboro, Mass.
Metropolitan Sales Agents:
The Woodhouse Manufacturing Co., 35 Warren St., New York

The Jaeger Fire Pumper

for Chevrolets, Fords, Dodges, Reos and Fordson Tractors.

The Jaeger Auto-Powered Pumper makes use of the 15 to 30 brake horse-power in the above named cars or trucks, at a price the smallest community can afford to pay and thus provide fire protection at a fraction of the cost of other apparatus.

Send for complete details.

Jaeger Portable Power Corp.
Woodbridge at Rivard St., Detroit, Mich.

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Over 2000 Fire Departments have 15,000 Larkin Shut-off Nozzles in service. They have a successful record that is not exceeded by any article used in the fire service. Specify and insist upon them in buying new apparatus.

Write for catalog

The LARKIN Mfg. Co.
Dayton, Ohio
High Grade Fire Dept. Supplies of All Kinds

When in the Market for New Equipment

please write us and we shall be glad to have the right manufacturers provide you with complete specifications and prices for your consideration. This service won't cost a cent nor place you under any obligation whatever. We just want to cooperate both with you and with manufacturers in every possible way.

FIRE ENGINEERING
225 W. 34th St., N. Y. C.

Compressed Air Fire Whistles, Fire Alarm Boxes, Gongs, Etc.

Complete Systems Installed

Estimates Cheerfully Given

LOPER FIRE ALARM COMPANY
Stonington, Conn.

The Schavoir Gas Mask

The latest and most advanced development in gas masks. Fire officials everywhere should get the facts.

Write for Complete Information

Schavoir Rubber Co. Stamford, Conn.

JOHN H. CLAY, INC.

1320 Ridge Ave., Philadelphia, Pa.

Established 1864

Manufacturer Fire Dept. Supplies: Automatic Door Spring Outfits and All Kinds of Hydrant Connections.

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Founded 1824 by Jacob Reed

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Thoroughly tailored of especially selected fabrics. Uniforms that look well, wear well and that will give entirely satisfactory service.

Reed's Uniforms are most economical because they represent full value for the amount expended.

Write for catalog and prices.

1424-1426 Chestnut St., Philadelphia, Pa.

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FIRE BOAT EQUIPMENT

Invincible and Callahan Nozzles

Fire Department Supplies

are in use throughout the country and giving unsurpassed service.

Every fire official should be fully acquainted with Morse equipment and have our catalog and other descriptive literature on file for ready reference whenever considering the purchase of new equipment.

You will find that it pays.

Write for Catalog

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"FAMOUS KALAMAZOO"

Firemen's Uniforms has been proven by thousands of firemen. Catalog F501 will tell you all about them.

The HENDERSON-AMES CO.
KALAMAZOO, MICH.

Quick-Acting Reliable

Anderson -Hale Improved

FIRE STATION DOOR OPENERS

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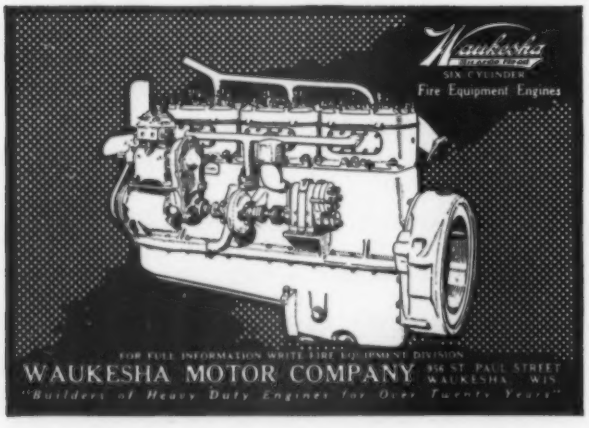
Mfrs. Motor Fire Equipment and Fire Supplies

Kansas City, Kansas



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Hahn Motor Truck Co.,
Hamburg, Pa.

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Fire Protection Equipment And Supplies

Fire Protection Equipment And Supplies

1 Acid Siphons
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10. Asbestos, Clothing.
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19 Brake Linings.
20 Brooms, Fire.
21 Building Materials, Fire Retardant.
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Just run down the list of equipment, fill out the coupon below, and mail it to us with the numbers that indicate the equipment in which you are interested.

We will then notify reliable manufacturers of your interest in such equipment and request that without cost to you or any obligation they send you the information you desire.

They will gladly do this. So go to it! Ask for what you want. This page is for your convenience. Use it now—and whenever you decide to buy new equipment of any kind.

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225 West 34th St., New York City.

As a fire protection official I should like to have descriptive literature and complete information mailed to me, without cost or obligation, on the equipment indicated by the following numbers:

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58 Hose Holders.
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Dec. 10, 1926

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The Standard for the Fire Fighters of America

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The *Pacemaker* chassis has a 55½ H. P. 6-cyl. motor, which will pump 300 gallons per minute, and is built in 9 and 12 ft. loading spaces.

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FIRE HYDRANTS
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Note—

The positive waste valve.

All operating threads are above the stuffing box.

No toggles, small screws or other small, quick-wearing parts.

All moving parts are bronze or bronze bushed.

The outside casing permits replacing a two-way standpipe with a steamer and two-way standpipe without digging up the ground.

Valves and Boxes
Cast Iron Pipe and Fittings

R. D. WOOD & CO.
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Successful Since Sixty-Eight

The Worcester Fire Alarm Signal says "Fire." Its call is far-reaching and distinct, and because of the mechanical perfection in design and workmanship, harsh, objectionable screeches are eliminated.

This alarm has been perfected by many years of manufacturing experience, and is giving complete satisfaction in countless cities and towns.

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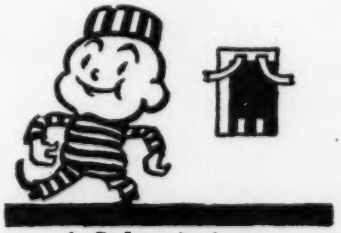

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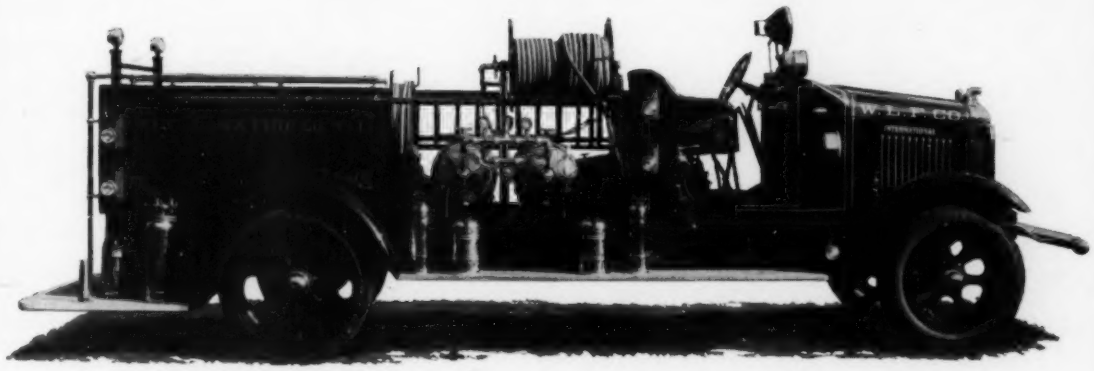

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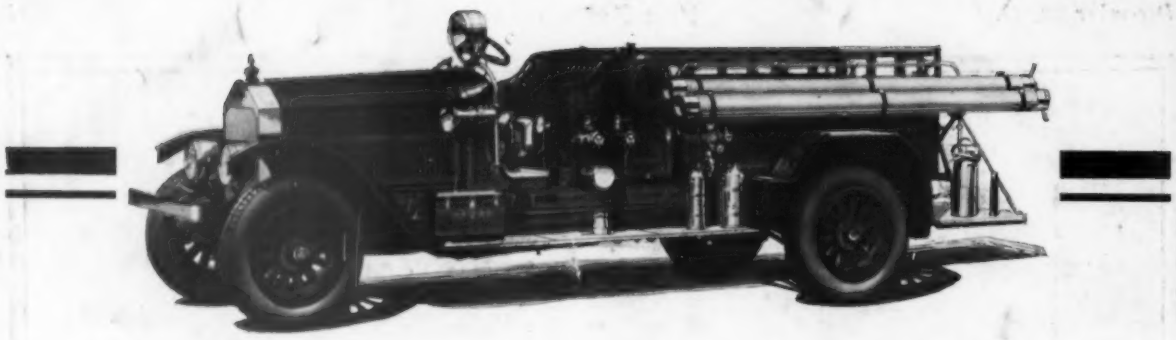

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